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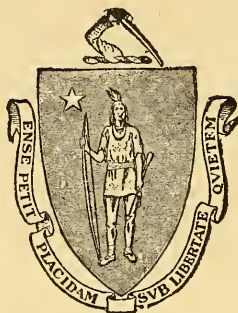
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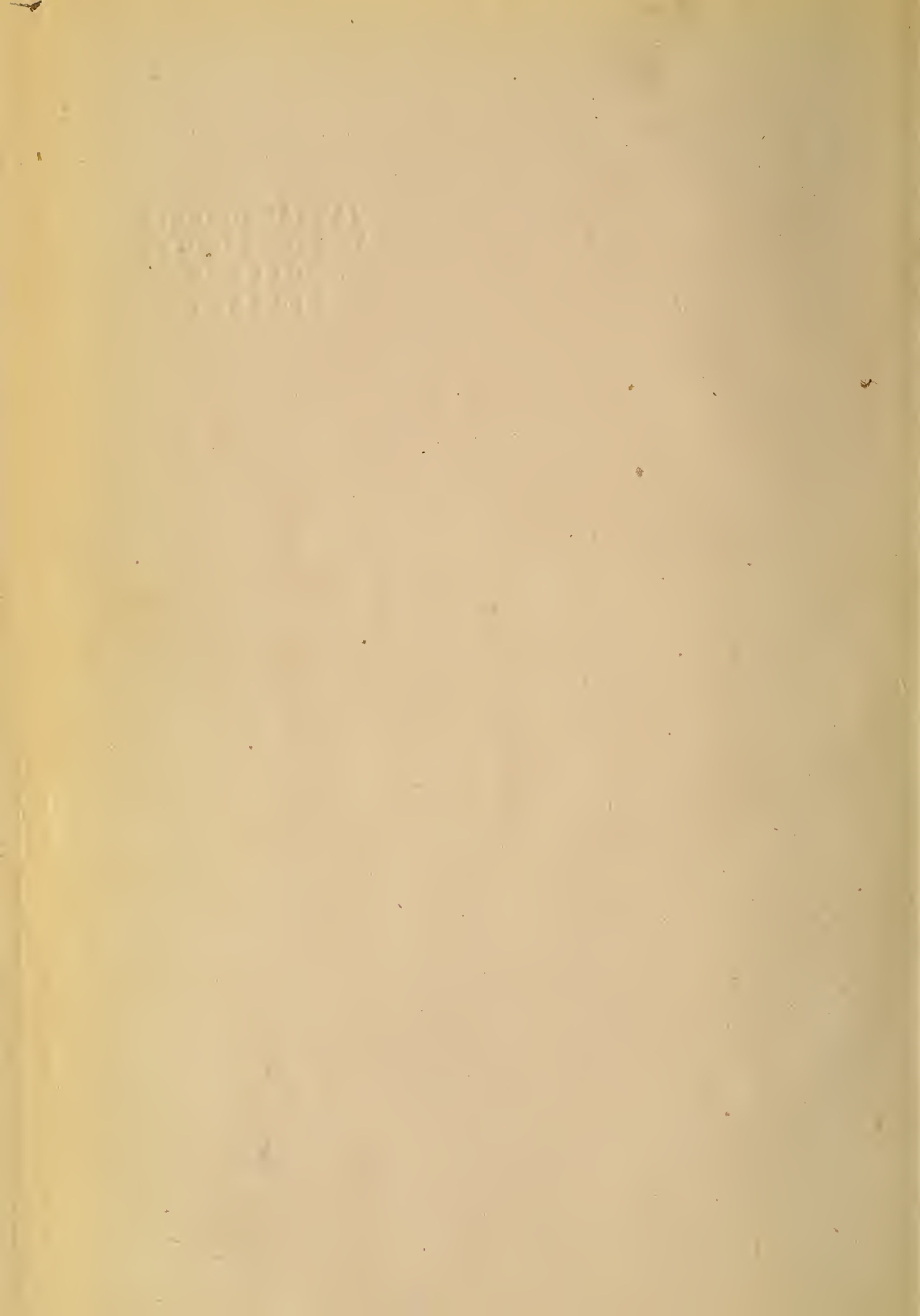
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HEN and CHICKS

An illustration of a brown hen standing over a group of small, fluffy chicks. The hen is facing left, and the chicks are scattered around her feet. The illustration is rendered in a simple, woodcut style with black outlines and some brown shading.


or

How to Make Money
Raising Poultry

ILLUSTRATED

PRICE 50 CENTS

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HEN *and*

CHICKS

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Raising Poultry

ILLUSTRATED

Price 50 Cents

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VOLUME ONE



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PORTRAITS of the birds shown in this volume are taken mostly from life without retouching. We have endeavored to show types and not perfection in form or feathers. They are not artists' "ideals;" but, for the most part, represent the actual, every-day appearance of the various types of birds as one would view them in the yards where they are bred and raised.

Of course we could have illustrated this book with reproduced Standard illustrations, or with engravings made from artistically retouched photographs, that look exceptionally fine on paper, but as HEN AND CHICKS is designed primarily as a practical instructor for those engaged in actual work, it has been deemed far more preferable to have our illustrations represent real, living birds, rather than imaginary creatures that exist only in the minds of fanciful artists.



Mrs. L. B. Audigier and her Scotch Collie, Beauty Bright II,
109,257, A. K. S. C. B.

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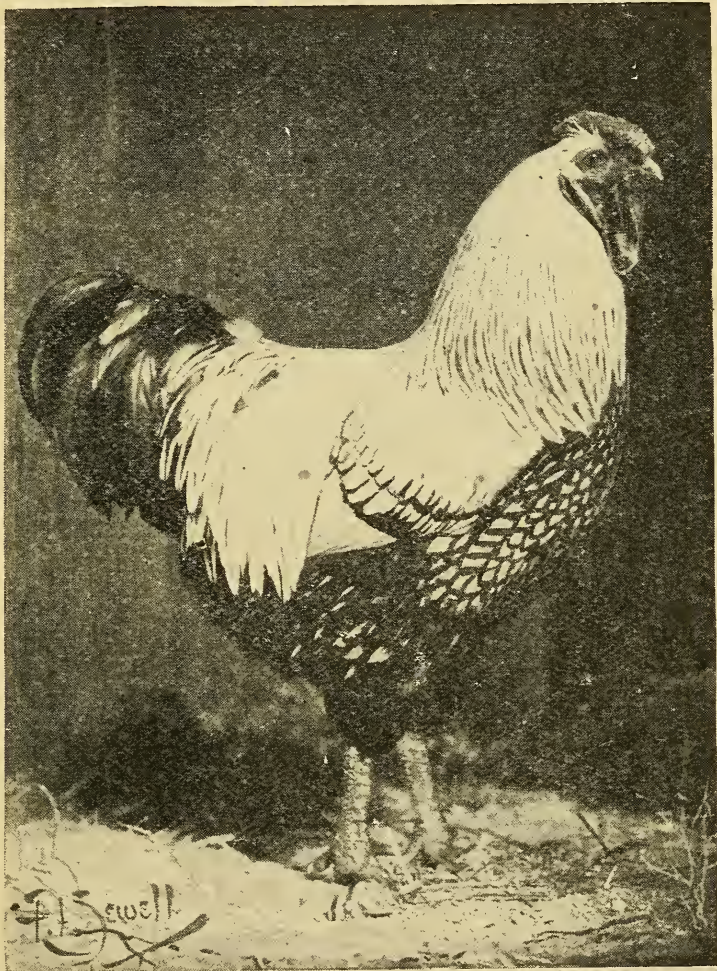
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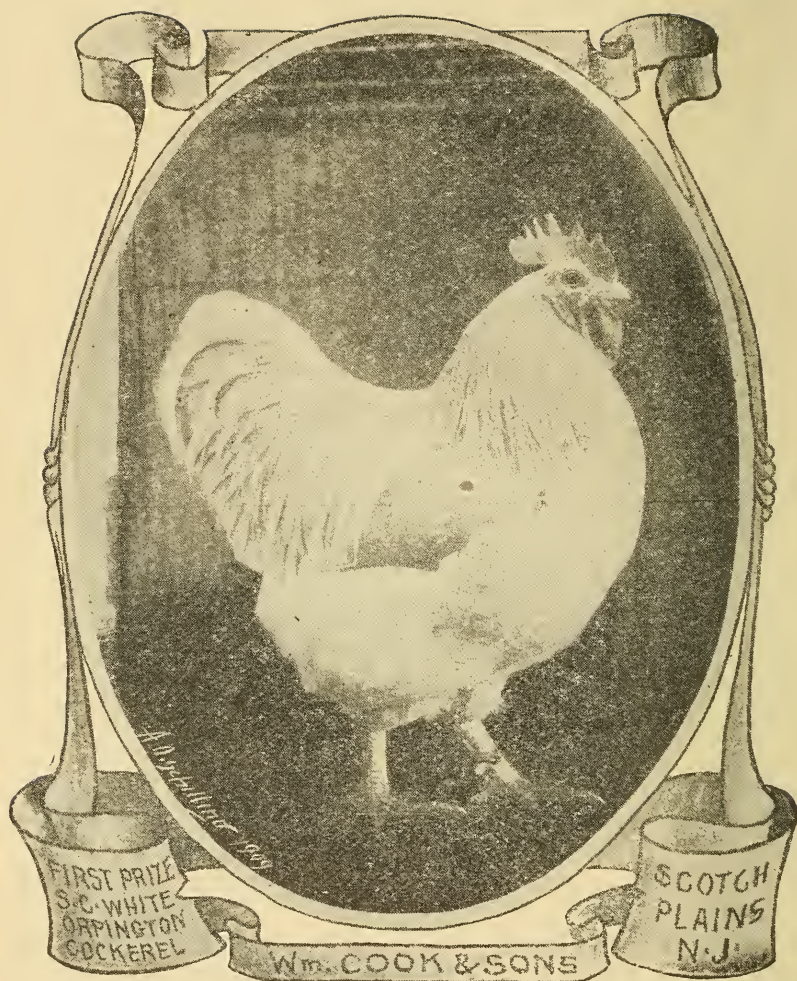
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FIRST PRIZE COCK, AT NEW YORK, 1909-10
OWNED BY PAUL W. DOLL, WHITE PLAINS, N.Y.

SILVER WYANDOTTE



SINGLE COMB WHITE ORPINGTON COCKEREL
First at Madison Square. Owned and bred by
Wm. Cook & Sons, Originators of all the
Orpingtons, Scotch Plains, N. J.

STUDY YOUR BUSINESS

NO MATTER what you undertake, it is necessary to study your business. The poultry business is no exception. The man who thinks he will make a fortune in one year is doomed to failure. It requires not only study but long experience. All the little ins and outs of the business must be learned by actual contact. What breed to select, how to house your birds, how to feed, how to secure eggs, how to hatch, how to grow the young fowls, how to procure feed, how to market products, how to keep down expenses and yet get best results—all these and a hundred more points must be carefully considered and carried out to a successful issue. The man who does not realize that successful poultry-keeping requires study and work would better let it severely alone. It is no holiday job as so many seem to suppose. You must think about it by day and by night. Of course, if hens laid eggs at word of command the problem would be easy, but they do not. It often takes the poultryman's highest art of coaxing to get any action at all. And yet for the man who is zealous and fitted for the work the poultry business has a rich reward. It never gave greater promise than today. Thousands of people are making money at it and there is room for thousands more.—T.C.K.

HIGH FARM RECORD

Any farmer can make a good thing out of eggs if he will. The plan is to keep selecting the best layers and kill off or sell all others. Replenish your laying stock by pullets out of eggs from best layers only. In a few years you will have a flock of layers of very superior order. The common farmer can run up a high laying record the same as any specialist if only he will exercise common-sense and try.

HOW TO GET EGGS IN WINTER

To get many eggs in winter it is necessary to have early hatched pullets or yearling hens that have moulted early. Pullets preferred. We must have comfortable houses and not have the stock over crowded. Feeding is very important, but there are other things that command attention besides the feed question. Plenty of fresh, pure water is an absolute essential. Grit, oyster shell and charcoal are a necessity also. Now to advise anyone just how to feed their hens to get winter eggs is no easy job, as what would strike one man would not another. It depends something on the houses, the breed, the care given and many other things.

I never have any set rules for feeding, as a man can better tell what his hens need by studying their actions a little better than I can tell him several hundred miles away.

In feeding for winter eggs we must strive to feed a variety of foods. A variety. Herein lies the success or failure to produce winter eggs. Chickens are like people; they don't want the same thing every meal. People, as a rule like potatoes, but to get potatoes and nothing else would be slim living. Bread is the staff of life, but if we had to eat bread only we would probably look around for another boarding place. Still we know of some people who feed their hens whole corn all winter, then cuss because they don't lay an egg every day. We don't blame them for going on a strike.

I am not an advocate of feeding much wet mash. A moist mash once or twice a week will help to add to the variety for the hens, and make a change, but I don't think wet mash is the thing for very steady feeding. In the mornings I feed whole oats in the litter of chaff on the floor, making the birds scratch for every grain of it. I usually

rake it in with a rake or fork, making it necessary for the birds to scratch or go hungry. I go out after dark and scatter their morning feed in the litter, raking it in. Then they can go right to work when they get off the roost in the morning and don't have to wait around for their breakfast. One morning I feed the oats as stated, then at noon give a feed of wheat in the litter and you ought to see them sail into it. At night I give a feed of whole corn—all they will want. This too is scattered in the litter. The feed for the next morning I try to change a little; probably feed them wheat or half wheat and oats. At noon a few handfuls of cracked wheat and some cracked sunflower seed scattered in the litter will keep the birds busy for some time. The next day you can feed a mash. I feed occasionally soaked oats. The birds relish this and it is good for a change.

I get stale bread from the bakers at $1\frac{1}{2}$ c per pound. A loaf is thrown into the pen for them to pick at. I feed them table scraps, parings, apples, small potatoes, in fact any old thing that I think will do them good, such as cabbage, beets, etc. I also feed green bone, and keep before them all the time a dry mash made up of 200 pounds bran, 100 pounds middlings, 100 pounds corn meal. This is fed in hoppers where the birds have free access to it. Make your birds work for all the grain fed. They need the exercise and it will keep them out of mischief such as feather pulling, egg eating, etc.

Remember to give a variety. Variety is what counts. It is the keynote to success in winter egg production. Don't be afraid of feeding too much. More flocks are underfed than overfed. I am a believer in the "full and plenty" method. Hens properly cared for, kept busy and fed a variety of good wholesome feed cannot help but lay even if it is cold weather.—*Plummer McCullough*.

The most eggs in a given period do not always bring greatest net profits. Expenses must be considered.

EGGS THE OBJECT

WHILE the fancier may breed for color and ideal form, the paramount object of poultry culture must be eggs. More people are interested in this feature of poultry products than in any other. How shall eggs be best obtained? Back of direct feeding and management comes increased power of production in the hens themselves. The trap nest enables the grower to select his most prolific hens and these he sets apart for breeding purposes. Say what you may, the general capacity of hens for egg production can be greatly increased under the laws of evolution. The upward climb from the original jungle fowl shows this. By properly growing your fowls in pens from year to year the evils of inbreeding may be avoided. Culling out the poorest layers and preserving the best will constantly increase the average egg-producing capacity of your fowl. All that is necessary is to continuously apply the law of development. What the ultimate result may be is only conjectural.—T.C.K.

SUCCESS IN POULTRY

There is a popular idea that when a man fails at everything else he can strike out and make a fortune out of poultry. There never was a greater mistake. There is money in poultry for the right sort of man, but he must work for it the same as any other business.

Another mistake is that it will pay to go into the poultry business temporarily. One has to learn the ropes by experience and build up in this as well as in other lines, and it generally takes years to do it. Customers can not be acquired in a few weeks. The best points in selling are picked up only through long years of experience. The only true way is to go in for life and stick to it.

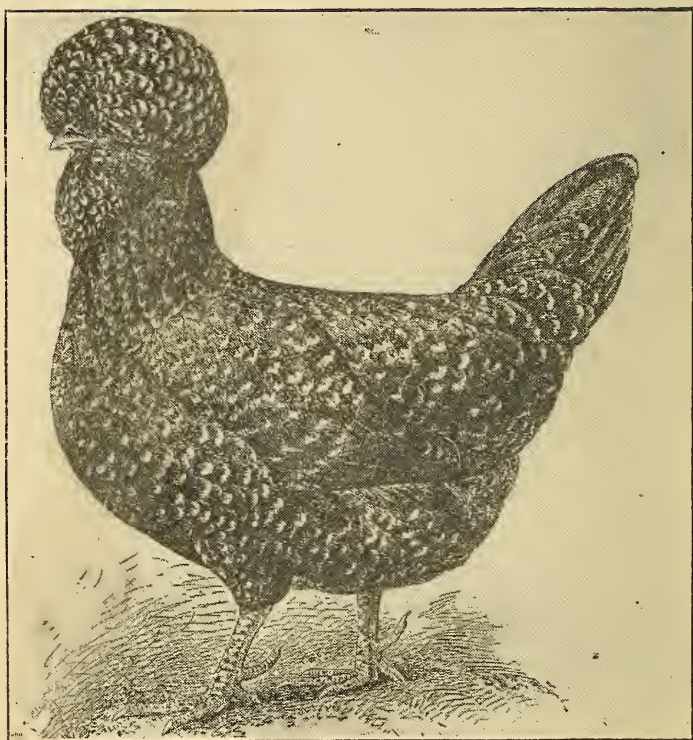
CURE FOR CHOLERA

I NOTICED in a recent number of a poultry paper some one deploring the loss of his fowls from cholera. The owner claimed that though apparently well at feeding time at night, fully a fifth of them were dead the next morning; and that after burying these, on his return he found several others dead. At this time a neighbor pronounced the disease cholera and prescribed venetian red as an effective remedy, saving the remainder of the flock. The neighbor did a good deed and the remedy was excellent; but I want to enter my protest against the diagnosis of the disease. No cholera that I have ever known enters a flock so suddenly and violently, and destroys so many fowls in a night without some previous warning. Neither would a cure have been so quickly and easily effected in case of cholera in so violent a form. The disease in this case was, in my opinion, limberneck, caused from the fowls coming in contact with the decaying carcass of some dead animal and greedily eating the worms with which it was infested. This has often been known to produce such an effect as above stated and in all my many years of experience with poultry I have never known a better remedy for it than venetian red. To give it to fowls that are unable to eat, it should be given in pills, mixed with a little water, and flour enough to make it stick together, in quantities of about a half teaspoonful three times a day. Venetian red has proven itself a good remedy in cholera where it has not reached too deep a hold. So also has quinine. If I find a case of cholera among my flock I try as soon as possible to give them all a good dose of venetian red or quinine two or three times a week until I think the trouble is over. Quinine should be given in doses of about one teaspoonful to a dozen fowls. Quinine and venetian red are both good, in smaller quantities of course, for young chicks that appear weakly or diseased from almost any

cause, except vermin. Where incubators and brooders are used one may easily avert these pests, but if chicks are to be raised with hens, one must ever be on the alert to keep rid of them. It is safest to dust the sitting hen well once a week with good insect powder, giving her another good dusting on removing her with her brood from the nest. This is some trouble but not so much trouble or expense either as losing half of them for want of it. If you do not use insect powder, be sure on taking them from the nest to grease top of the head and under the throat of each chick and rub a little coal oil on the hen, rubbing it in next to the skin, but beware of using too much oil on the hen or grease on the chicks as greasy chicks are much more susceptible to either cold or heat and will be easily killed in that way when young. I have a vivid recollection of a time in my early experience with chicks of losing about twenty in one day from an over-generous greasing. Another time on finding one of my hens, which had chickens nearly large enough to wean, very much infested with lice I gave her a thorough oiling, literally pouring the coal oil over her. She soon became so intoxicated from the effects of the oil that she reeled and fell about like a drunken man. I had to remove her from the coop and the next morning she was dead, looking as though she had been dipped into an oil barrel. Well this was experience; and, looking back over these and other similar mistakes they seem foolish to me now. But take a girl young as I was then from town, where she had never had any experience whatever in raising chickens and put her out on the farm with a few hens and no poultry literature and she may not do much better. So it is this class and not the experienced poultry raiser to whom I have addressed these few remarks. Every beginner in the poultry business, no matter how few or how many birds he or she expects to handle, should read at least one good poultry paper. You can not expect to do everything you are advised to do by the different writers but you get many good practical things which will be of service to you.—MRS. LAURA A. BRYAN.



HOUDAN COCK
Dr. G. W. Taylor, Orleans, Indiana.



HOUDAN HEN

CAUSES OF DIARRHOEA

"L. E. R., Ulster Heights, N. Y.: My chicks are dying off without apparent cause after they are forty-eight hours old. I feed them rolled oats every two hours for about two days; after this I feed bran, middling, corn meal and ground oats with the hulls sifted out of it. After about a week I feed them four times a day. They are kept free from lice and have pure water, oyster shells and grit before them. Some are dying of bowel disease, but not all. I lost about fifty chicks, some of them when three to four weeks old. Now I have changed their feed ration as follows: Two-thirds crushed wheat, one-third rolled oats, one-third small crushed corn; charcoal, grit, some beef scraps and millet seed, all mixed together. Please give me your advice in regard to my trouble."

We shall all agree, I think, that chicks do not die without cause, even though the cause may not be apparent. Bowel trouble is seldom a definite symptom, for the reason that so many ills show this as one of the accompaniments. This is true not only of affections of lice, but of chills, of anything that lowers the resisting power of the birds, and it is true of overfeeding as well, since this deranges the digestive tract, and the first symptom of such derangement may be diarrhoea. We are—many of us, at least—so afraid of fowl cholera that we are prone to regard any looseness of the bowels as in itself a disease, when it is only a symptom of trouble somewhere. Often looseness of this sort may be the physical salvation. I recall one case in which a man had severe diarrhoea, for which a physician was called. He was told that, had he not had the diarrhoea he would probably have had typhoid fever.

I do not in the least like the plan of feeding anything at two-hour intervals, much less such a heavy stuff as oatmeal; though I admit the temptation of its clean, white flakes of just the right size. It is my opinion that the great trouble with many flocks of small chicks is that they are fed so heav-

ily during the first week they cannot over come the handicap. This may be your trouble. There is not the least need of feeding baby chicks every two hours, and there is very great harm in it unless they get only a very small quantity. I am not at all afraid to feed every hour if the chicks are under my eyes, so that I know how much and how eagerly they have eaten, and can watch the state of their crops. But the oftener I feed the more care I take to vary the feed, and, after the first three days, to vary the nature of it, ringing the changes on granulated grain, soft feed and green stuff. A lack of green stuff permits very early derangement of the small digestive apparatus, and this, or lack of shade or even the method of handling for lice might bring on bowel difficulties as a symptom of something wrong. Look over all your conditions once more, and if you find nothing else wrong conclude that you have fed too heavily of grain before the chicks could stand it.—C. S. Valentine, in *American Agriculturist*.

WHAT GRANDMA SAYS

Work is just as necessary with chickens as with humans. Without it both get "out of sorts." Make your hens scratch for most they get.

Don't feel disappointed when none of your pullets turn out to be of the 200-egg variety. Such excellence is a rare jewel that is not picked up every day.

They talk about popular strains these days. What's wrong with the Shanghai? That was considered the smartest sort of chicken when I can first remember.

Hopper feeding came in too late for me. So I know but little about it. Anyway, I prefer to control the amount each fowl gets. Some days they need more and others less.

If you want winter eggs hatch out a nest of chicks as early in the spring as possible and save all the pullets for layers. They should begin laying in October and continue through the season when eggs are high in price.

HEALTH MEANS WEALTH IN FOWLS

THE one, of all, most important things in Poultry Culture, and the one thing essential to all success and development, is health of the fowls. Without this health in our birds, we need not look forward with anticipation of attaining any wealth. In every inquiry the breeder gets, these points are most strongly emphasized. Health, vigor and vitality. The two latter qualities cannot be found without this paramount; health. In fact every success in the poultry business thoroughly depends upon the one greatest essential.

For the beginner in the poultry business, it is very important that he look to the health of the birds he is to buy to make the start with, for without health in the parent stock, it is nearly impossible to breed up to this point. The one most important point in connection with the hatching and rearing chicks, either by natural or artificial incubation, is the health of the stock in the breeding pens. A strong healthy germ in a rich well-formed egg is most positively calculated to produce a strong, healthy, vigorous, chick. Bad health in the parent stock is the surest beginning of White Diarrhoea, (so called) in the baby chicks. Indigestion, weak legs, and a score of other ailments that take away the downy little fellows by the dozens can all, more or less, be traced directly back to bad health in the parent stock. The parent stock being healthy, it is comparatively easy to maintain this health throughout other generations, and on the other hand it is very easy to let the health go down so that the generations will get weaker and weaker each year. This all depends solely on the care and attention the birds receive. Give the birds proper care and they will be healthy, strong and vigorous breeders, and will produce youngsters of this same strength and vitality.

Lice and mites only exist where the birds do not receive

proper care, and there is no more deadly enemy of health in fowls than lice and mites. Feeding improper and unclean feed is another great enemy of health. We once heard of a man in the poultry business who had all the slop and refuse from a neighboring town hauled out to his place for chicken feed. This was fed in the houses and around the yards, until the entire place had a foul odor. That was very repulsive. The floors (dirt) of the houses were wet and sloppy. The houses were wet and dark, no opening save a door and what cracks that had not been covered, and the owner was ever complaining that his fowls did not seem as bright and healthy as other men's birds, and he couldn't see why, for he gave them plenty to eat. This sort of treatment of birds is sure to lead to sickness and weakness, and utter failure in every branch of the business. The healthy birds are the birds that are fortunate in having an owner that lives with them, so to speak, feels their wants, simply applies the golden rule to them, and treats their wants and necessities as he would like his own considered. He gives them a clean well lighted, well ventilated, dry, sanitary house, well white-washed, thoroughly relieved of those enemies, lice and mites; gives them a good scratching pen with deep clean litter for healthy exercise, so necessary when we want health. Such care will not only repay you with healthy fowls, but a greater egg production, stronger and more vigorous chicks, free from disease, and in proper condition to mature into well developed breeders and specimens to grace the show room, and win the ribbons.

Don't neglect your birds—if you forget them even for a day, it is detrimental to their health and welfare, and you suffer just that much loss.—FOUNT H. RION.

Unless the farmer has a special aptitude for poultry it is better left to his wife or other female member of the family. Of course his assistance is often very helpful,

CHICK GROWING AND CHICK FEEDING

We read a great deal in agricultural journals as to crop-growing and crop-feeding. The same rules apply to growing young chickens to maturity, as the chick depends on man for its support and growth, as do crops and crop-growing depend on man for their culture and soil needs. And it is very important we know something as to the life of a chick, and its natural habits to be successful in raising a chick to maturity. The chick is an index to the full grown bird, and as he is developed into a full grown bird hinges his future usefulness. In studying the composition of an egg, we find stored therein (no matter what the mother hen had to eat, she never laid it until it was a complete composition of an egg) a perfectly natural balanced ration, and upon this the chick lives and develops during incubation; and nature goes still further, as the chick is hatched with enough of this natural diet for its need until 24 to 36 hours old. Now this being done must we commence at once feeding an unnatural food?

What is a natural food for a growing chick? My first answer is, what is the composition of an egg. And second, What is the composition of a chick's meat carcass? Each reader can figure this out for himself or herself or if he will take the pains to find it, it is already figured out for him in the various books written by poultry experts and in bulletins printed at the experiment stations. By studying these we learn the ratio of the egg and the flesh carcass, and we must conform our feed rations to the same ratio. This all takes time and study, but not any more than does any avenue of life, a useful life, and I will admit that the larger percent of chicks are grown without any of the above knowledge. But it does not go to prove that it is the right way to breed and rear poultry.

Did you ever take the pains to follow the life of a bird or animal for two or three generations? If you have you

can readily see the importance of knowing the chicks' life history.

What we most need in our poultry breeding is "vigor and prolificness," and to obtain this we must breed, feed and rear our breeding stock on practical, natural and scientific plans.—
J. A. DINWIDDIE.

CARING FOR LITTLE CHICKS

Don't be in a hurry to get freshly hatched chicks out of the nest. They will get chilled and die. Let Biddy complete her hatch at leisure. A whole day or more should be given to finish the work. It is a mistake to feed young chickens at once. They live on the food absorbed from the egg for about two days. To give other food in the meantime is contrary to nature and an injury.

A chick's first food should not be soft and sloppy. Give stale soda crackers crumbed fine, or slightly dampened oatmeal, or water-mixed cornbread without salt. Sweet milk is good in the place of water.

Don't forget to furnish the young brood with fine chick grit. Also give them green food cut fine. Give water so they can't get their feet in it. The grit may be scattered over the bottom of their coop.

Keep young chickens up for three or four days. They should be good and strong before their mother leads them abroad. Even then great care must be taken to prevent drabbling in wet grass. This kills thousands.

If lice appear, dust with insect powder or rub a little grease on the head and under the wings and tail of the mother. However, if the nest was properly cared for there should be no trouble—T.C.K.

It is an old saying that cleanliness is next to godliness. This applies to the hen house as much as to anything else. It is time now to clean up!



SILVER LACED WYANDOTTE COCK



BLACK-BREASTED RED GAME
H. M. Compton, Knoxville, Tenn.

FEEDING WITH A PURPOSE

THE FANCIERS have done much for the improvement of poultry on esthetic lines. Form, color, and general beauty have been greatly improved. New breeds also have originated. Yet breeding on economic lines has scarcely advanced beyond its infancy. Something has been done to increase egg capacity, but selection for vigor and meat-producing advantages have made but little progress. In the last quarter of a century beef cattle and hogs have been wonderfully improved by breeding for quick growth and early maturity. Time and expense in feeding for a desired weight have been greatly reduced. In this way money is turned over more rapidly and time saved in getting on the market. Breeders must do the same for poultry. Pullets must be bred to lay at an earlier age. The maturity of broilers, friers, and roasters must be hastened by some weeks. The government at Washington is working on these problems as appears from a report now before us. Individual breeders may also do much. This is a very interesting line of work and one that will pay handsomely.—T.C.K.

FARM NOTES

The most satisfactory fowl for the farm is a dual-purpose chicken—one that furnishes both meat and eggs. No farmer wants eggs alone. He must have friers, broilers and roasters also.

The Orpington is an English bird which is growing into favor very rapidly. It is larger than the American birds and a fine layer. For the table it is unsurpassed. Many farmers find nothing better than the Orpington.

The Rhode Island Reds are also exceedingly popular. Their color takes and their general character adapts them to the farm. They seem closer akin to the old red rooster, and that counts with farm people.

PLAN FOR A POULTRY HOUSE

Bear in mind that no iron clad rule will apply in all localities nor under all circumstances to housing or feeding, but to get eggs in winter we must, as near as we can, provide Spring conditions. First, arrange an inclosure 30x100 feet, extending north and south, with a gradual slope to the south if possible. Build your house 8x14 feet, extending east and west, fronting to the south; make the north side and both ends snug and tight, having the south side open. Floor your house if not in a well drained location, inclining the floor slightly to the front. Make the floor two feet off the ground; place a partition six feet from one end, thereby giving two apartments, one 6x8 feet for roosts, and one 8x8 feet for a scratching shed. Place two ten-inch boards above floor of scratch shed at front to hold litter, and make the remainder of front secure with wire netting. Run fence from each end of house to the lot fence, making in effect two lots 30x50 feet. Sow land to rye or other small grain in September. The house and grounds are of sufficient size for eighteen or twenty hens. When rye is well started put the desired number of hens of some well known heavy laying breed in one of the pens, changing them from one to the other as the condition of the rye indicates, endeavoring to keep them in the south end in the most severe weather. Provide plenty of litter for scratch shed, thereby compelling hens to take plenty of exercise when she would otherwise be idle and drawn up with cold. Oak leaves gathered from the forest make an excellent litter. Keep house and yards in a thorough sanitary condition. Give birds slightly warmed water in cold weather and a warm mash, composed of wheat bran and corn meal in the morning. Keep a sprinkling of some small mixed grain in litter in severe weather to keep them moving. I have found nothing better at night than a bountiful feed of whole corn thoroughly warm but not hot. Do not feed in the litter but on the yard or some clean place just before they go to roost. A little beef scrap and ground bone

fed three or four times a week is beneficial. Give plenty of charcoal and grit at all times. Did you know that lime and coarse sand well mixed and made into a mortar such as is used in laying brick, if beaten up after it is dry, makes an excellent grit? Make each nest separate and apart from every other nest and where it may be hidden from passers by and the other busy hens. (I will send a plan for nest to as many as will send a stamped addressed envelope for same. It is not a patent device and is not for sale). Do not disturb your hens in such a way as to make them shy, but go among them at feeding time and have them as gentle as you can. Study to promote the comfort and satisfy the appetite of your hens, and they will do the rest. Too much is being written on the diseases of poultry and not enough careful study and close application on how to keep them in a bright healthy condition. A little nature study will help us along.—MILTON DOSS, Kimberly, Ala.

MATING RHODE ISLAND REDS

As the whole secret of success in the fancy poultry business is in the manner of mating for best results, I thought possibly some in-experienced Red fancier would appreciate a little of my experience and a few suggestions.

Mating Reds is not unlike that of any other standard breed, in that it must be scientific, and not guess or haphazard business. In other words, when you make a mating you must be in a position to know exactly whether it is improved or not. This can only be done by testing your females separately, marking the chicks from each hen, keeping a book-record of each marking, noting from which female and by what male. After the chicks have developed fully, you go through them all and ascertain how many you have of each mark, put them together in separate coops or yards, picture in your mind the markings and mate up of their sire and dam. Study the Standard for shape and color, and note which individual mating produced the most well-marked birds. Also note

just how the mating resulted, and from this you get a lesson in mating, which, if practiced and studied well, will prevent you from buying your winners from other breeders. You are able to produce them from matings that you know will deliver the goods, and very likely from matings that you had never thought of producing such results. I have some females in my yard that have never and never will be exhibited by me, that are producing show birds hard to beat anywhere. I alone am the only one that knows this. Should I sell these females they would possibly not give satisfaction. They would raise a kick because they were not show birds. On the other hand it is a fact that every prize winner is not a producer of such. But remember, that by following up the correct lines of inbreeding you will shortly establish a producing strain of like begetting like; but you cannot get it by buying from Tom, Dick and Harry. You must establish it your self as suggested above.

Now it is a fact that half the results depend on the male, especially for color. It is utterly impossible to get a Red bird, either male or female, from a buff or yellow male. Don't make any difference *how red* the female is. I want the male to be just as red as he wishes, but I want him clean in under-color, and I want his eye red, also a strong ear lobe, and low, thick, firmly set comb, whether it has just five points or not it must be firm and not thin and high like a Leghorn. Don't throw him down because every tail feather is not black, neither because the black does not extend the full length of lower side of flight feathers; but take all of this you can, giving the first-named markings the preference. He should be as well shaped as you can get, but let color predominate.

Now the female does not have to be so red, neither throw her down because of a little smut in under-color. Of course we want them all as red as we can get them, and with clean under-color; but how many have you noticed? We certainly cannot get many from buffs; but we will get more reds from light colored females than from breeding to a light colored

male. Do not use, however, a female with "cotton" under-color; take smut every time in preference. We want the females to have the shape, whether she has just the color or not. She must be oblong, straight, flat back, not cushioned like a Cochin, nor concaved like a Leghorn or Rock. Long keel bone; not a round breast like a Wyandotte. Get the proper type from the Standard picture. Let the shape and type predominate. If she has good type all over, good strong color, especially deep in under-color, other sections good, and because her eye is not absolutely *red* do not throw her down, for there you may throw away many a coming prize winner.

You will afterwards, as stated in the outset, get more of the better by producing them yourself. But start right and keep right, and you will end right.—H. B. LANSDEN, Manchester, Tenn.

POULTRY PICKINGS

Have roosts near the ground. Fowls are often worried in trying to reach the high perch and may be injured in jumping down.

You may not believe it but the best way to handle a duck or goose is by the neck. Their feet were not made for handles but to swim with.

The best thing to do with an old hen is to make her fat enough to weigh ten pounds and then sell her. At that weight she ought to bring one dollar.

Young turkeys are more sensitive to damp, cold weather than chickens and hence are more difficult to raise. They do better if hatched after warm weather sets in.

In Chicago capons bring from 4 to 6 cents more per pound than any other of the best dressed adult poultry. The demand would take twenty times the present supply.

After the hatch comes off, clean out your incubator most thoroughly. Sponge it out well and then spray it with a good disinfectant. This is the only way to repeat a good hatch.

POULTRY FAILURES

The country is full of people who have not made a success of poultry. Most of them have not lost much for they didn't put much in, and it is well they didn't. If they had put in enough their losses might have been serious. We have before us the account of a man who, last year, put \$1,000 and paid out another thousand, and more, for expenses. Out of 26,000 eggs he hatched 10,000 chicks and raised only 1,000 of them, or 10 per cent. You may properly call that a failure if you want to. Now what was the matter with all these people? The matter was that they were not "onto their jobs," as the boys say. They would just as surely have failed in banking or merchandising under similar circumstances. The chicken business requires but little capital. So they went at that instead of banking, though they knew as little about conducting one as the other. There is a popular idea that just anybody can buy an incubator and raise poultry. There never was a greater mistake. It takes expert knowledge of the highest order. Nor can you take up the business and make a fortune in one year. The business must be started in a small way and grow as your experience grows. Every other business is that way and so is this. But does poultry ever pay anybody? Certainly it does, and it pays well, too. It pays people who understand it and put their knowledge into correct practice. Can a farmer succeed with poultry? He can better than anybody else if he goes at it anything like right, for he has all the advantages. He grows his own feed. He has plenty of good picking and range. He has time to begin in a small way and increase his flock as his experience increases. He has time to study poultry literature. He has time to market his products. He can keep posted and in touch with his business from every point of view. The farmer above everyone is the party to succeed with poultry.—T.C.K.

And now there is a hen's nest made of cement. It is cast from moulds and contains about four cents worth of material.

WHAT CONSTITUTES A PROFITABLE POULTRY FARM

A RIGHTLY managed poultry farm, so located that the expense is not too great in marketing, is sure to be profitable. When farms are established near cities, the market practically is right at the door.

Where farms are more remote from these city markets, a profit can be derived by shipping to the larger cities. In these days of excellent railroad facilities, any poultry plant within 100 miles of a city can reap the benefits of good prices, just as much as those located within easy drive. The cost of shipping is easily offset by the reduced cost of conducting such a plant away from highly taxable land.

The poultrymen of South Jersey, as a rule, ship their produce to New York City—a distance of 100 miles—and they secure for it the same prices as do the poultry plants located in Northern Jersey, just across the river from New York City. Land is cheaper in South Jersey, and the general cost of operating the plant is at least ten per cent. less than that of a section more thickly populated and of higher property values.

The foundation of all poultry farms is egg production. Successful broiler farms are the ones whereon eggs are produced. There is too much risk in buying eggs for hatching broilers. Such broilers as a rule are all sorts and sizes.

But it is a mistake to rely solely on broilers. It is better to have a broiler and egg combination.

There are seven distinct branches of poultry farming: Broilers, roasters, eggs, ducklings, goslings, turkeys and squab-pigeons. On a farm of about ten acres, where part of it is a grove or an orchard of large fruit trees, and where at a section there is running water so that a pond can be had, it will be found profitable to combine all these seven branches.

A few incubators could be started in December for

broilers and kept running until the last of May. **Ducklings** could be hatched from March 15th to July 15th. While hatching for broilers a number could be selected from the lot and fed and reared for roasting fowls.

During April and May broody hens could be placed on turkey and goose eggs. The squab-pigeons would require no labor as to hatching and rearing the young, as pigeons attend to that duty themselves. In this way during the height of the season there would be broilers, ducklings and squabs for sale, and during the winter eggs, roasters, goslings and turkeys.

Such a farm would accommodate 400 hens—200 of which should be of the American class, as Wyandottes, Plymouth Rocks or Rhode Island Reds; fifty of the Asiatic variety, as Light Brahmas; and 150 of the Mediterranean class, like Leghorns or Minorcas.

One hundred Pekin ducks would keep the incubators busy during the season. Two hundred and fifty pairs of Homer pigeons, mated, would produce all the squabs that the farm could take care of. Six pairs of geese and twelve turkeys and a gobbler, should produce sufficient of their kind to supply the local demand around the holidays.—M. K. BOYER.

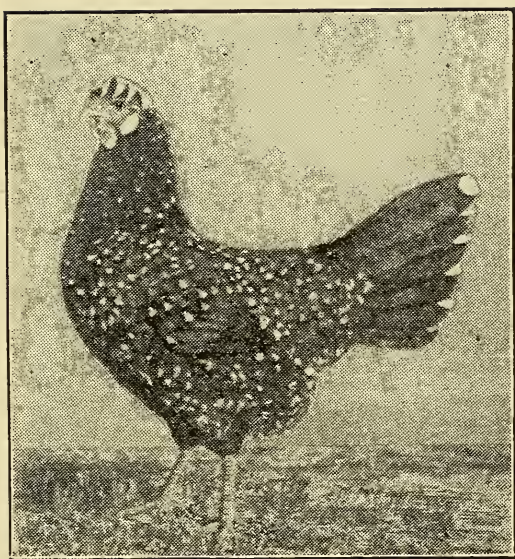
WHAT GRANDMA SAYS

It does no good to have fine poultry to sell unless **you** can reach a fine buyer.

Give your hens oats when you want eggs. They “**feel** their oats” the same as a horse when the supply is right.

I see they have put Mary’s lamb to running a **cream** separator. Poor thing! An incubator it seems to me **would** be easier.

I never favored corn to be a first-class egg food. It makes the hens fat and lazy and they quit laying, especially when getting old.



MOTTLED ANCONA HEN.
Dismukes & Arrington, Castalian Springs, Tenn.



PEKIN DUCKS
Dawson Bros. Franksville, Wis.

SEASONABLE CACKLINGSBY R. B. SANDO

EARLY hatched chicks, those out in February and March, require more care than May hatched chicks, yet the early ones are the fastest growers during warm spring weather and they are always well matured till fall and the pullets ready to begin laying. The cockerels from such hatches can also be marketed at good prices early in the season.

For most ordinary purposes, the month of April is the time to set eggs, as they will hatch and grow lustily during May. And a good start is half the battle, always.

Leghorns, Wyandottes, Plymouth Rocks, Rhode Island Reds and Orpingtons will mature for winter layers if hatched in May. Brahmas, Cochins and Langshans will grow well if hatched in May, but for winter layers they should be out a month earlier.

We cannot say too much in favor of the standard brands of prepared chick feed. They save time, make stronger chicks, and in every way are more satisfactory than home-prepared foods. Above all, they are certain in results.

Young chicks should not be fed before they are forty-eight hours old. Sometimes it is best to wait sixty hours. The digestive apparatus of the chick is completed after hatching and not before; hence, as the yolk is absorbed just before pipping, the chicks have plenty of nourishment for thirty-six to sixty hours. Give grit a little while before the first feed, and water a little while after.

Every breeder of poultry who has not already got pure-bred stock, should make a start in the right direction within the next month or two by buying eggs for hatching.

In planning to do this, it would be the part of wisdom to begin looking around at once. By placing your order a week or two before you want the eggs shipped, you may then

be sure of having the eggs at the time desired. Beginning with the first of April a large number of buyers want eggs shipped, and those who get their orders in first are the ones that will get their eggs quickly and on time.

Eight chicks is a good hatch from fifteen eggs that have been shipped any considerable distance. If you get that many, do not get grouchy at the breeder who furnished you the eggs. Reliable breeders never ship out eggs from pens that are not testing well in their own hatching, yet it is often the case that these very same good eggs will be so roughly handled by the express companies that the shipment has to be duplicated by the long-suffering breeder.

This is the breeder's side of the story, and it has not been exaggerated. The buyer has all the advantage in that if he buys of a reliable breeder, poor hatches will be duplicated at half price or all infertile eggs replaced. In this way, the buyer is perfectly safe and sure to get results.

There is no doubt that the mash feeds composed of ground corn and oats and bran (seasoned with cut alfalfa or clover), is a good thing on the bill of fare for the laying fowls, but during the breeding season do not feed too much of it to the hens that you are expecting to produce youngsters to maintain your flocks. Rather, feed such breeding birds mostly dry grain, scattered in a deep litter, giving them once a day a light mess of steamed alfalfa or clover cut into edible lengths, sugar beets, small cabbages, or other such vegetables which may be handy. An occasional feed of mash will not harm breeders, but where they are forced too much with hot mashes and condiments the fertility and strength of the germs in the eggs is always impaired.

If your hen house is clean and has been well cared for during the winter, it is scarcely likely that mites are very numerous this early in the season. However, it is the part of wisdom to commence getting ready for them, as they will soon make their appearance after the weather begins to warm up.

Body lice are always present in greater or lesser numbers,

as cold weather does not affect them, being where they can utilize the body warmth of the fowl. So it is a good idea at the present time to buy a "powder gun" and some lice powder and go over the fowls with it.

Clean out the nests every few weeks and fill them with clean nesting material (preferably excelsior), packing it well into the corners of the nest box if you are going to set hens in them. Every hen that is allowed to incubate should be well dusted two or three times while setting. Thus she will not be annoyed by the pests which would make her more or less "fidgety" were they allowed to multiply.

Moreover, if the old hen is free from vermin while the chicks are hatching, the little fellows will get a good start without being pestered by the vermin. Body lice gather on the chicks as soon as they are hatched, especially around the head and wings. A little lard dropped on the baby chicks' heads and well rubbed in will keep the head lice down and the chicks in a thrifty condition. Try this plan. Use only pure lard and not too much of it, but rub it well into the down on the chicks' heads.

THE SCRATCHING SHED

A SCRATCHING shed is most important to the poultry business. In dry weather leaf litter in the woods would serve instead, but not otherwise. All grain should be fed in dry litter, and straw is perhaps the best. The scratching shed may be built in connection with the roosting house, but not so as to receive the droppings of the fowls. Again, it may stand adjoining, or near, where the fowls may enter at once as they come from the perches. The shed should have one side open to the south and the other three closed in with boards or strong cloth screens that may be hooked up to give air on proper occasions. The litter should be kept fresh and clean and plentiful. In the same room may be the dust bath and receptacles for sharp grit. A small amount of food will keep the fowls scratching for hours and thus employ them under cover, away from inclement weather.—T. C. K.

EVERYDAY QUESTIONS AND ANSWERS

Will you please state how old pullets must be before their eggs are reliable and strong for hatching.—H. H. Berry, Tenn.

Eight months old for Mediterranean, ten months old for American breeds. Better mate them to a cock bird.—ED.

I am housing 20 S. C. B. Leghorns in a house 12 x 6 1-2 x 6 with two windows 2 x 2 in the south. Walls double boarded with tarred paper between. No ventilator. Combs froze last winter.

I wish you would kindly inform me in the next No. of the HEN how I could alter house so that combs will not freeze.—M. A., Iowa.

Your house is too tight. In Maine they use open front houses with success, also in Canada. When loosed at night in cold weather, the moisture from the fowls clings to the wall and produces damp heat; this causes the birds to catch cold and will also make it easier for combs to freeze. If you have a gable roof to the house, fill the upper part with straw and cut a small opening in each end of the gable, cover these with canvas. Your windows are too small and tight. Make your windows each two feet wide by four feet high, have upper half 2 x 2 of cloth, lower half of glass, fix the glass so the window can be opened on fair days, but close at night.—ED.

I have been losing some chickens and still have some afflicted from the effects of eating pumpkin seed. My neighbors say it is pumpkin seed killing them. They have free access to the pumpkins and eat heartily of them. It is only this year's chickens that are afflicted. They first

seem to lose the use of their legs, then sometimes they act like their back was broken; then they will take a spell of fluttering around and fall backwards and tumble around ever which way. Can you tell me what ails them? They sometimes live a month after they get this way; their combs stay bright and red and they are as hearty as usual. I have been bothered with this disease before and it comes in the fall of the year. M. E. B.—Tenn.

We have fed lots of pumpkins to our chickens, without bad results. We have heard of pumpkin seed effecting the kidneys but never of their effecting fowls. We believe your fowls have been poisoned. We lost three in the same way, though much quicker. Suppose you put up a couple of pens, give one all the pumpkins and seed they will eat, give the others no pumpkin. That will probably show if the trouble is caused by the pumpkin seed.

Please give me some information in regard to the White Orpington breed, as a layer, as a setter and as a table fowl. How do they compare with the White Wyandottes and Barred Rocks? I mean in size as well as other qualities. From what I know of the breed, they must be very much like the White Wyandottes. Please tell me if this is true of them. Any additional information you can give me on this subject will be very highly appreciated.—E. B. H.—Va.

It is claimed by breeders of the White Orpingtons that they are excellent layers, especially in winter. As table fowls they are probably better than Plymouth Rocks and Wyandottes. On account of their Dorking blood, they have longer keels and more breast meat. As broilers the White Wyandotte is better. Through the success of Kellarstrass with this breed and his sale of five for \$7,500 to Madame Paderewski, the wife of the pianist, a great deal of attention has been attracted to White Orpingtons. They are a fine fowl, the only drawback to their beauty being the color of

their legs. To the ordinary observer there is very little difference in the shape of Rocks, Wyandottes, Reds and Orpingtons. Orpingtons are the largest; weights are, Cock, 10, Hen 8, Cockerel 8, Pullet 7; for Plymouth Rocks, Cock 9 1-2, Hens 7 1-2, Cockerel 8, Pullet 6 1-2; for Wyandottes, Cock 8 1-2, Hen 6 1-2, Cockerel 7 1-2, Pullet 5 1-2. If you admire the White Orpingtons, you will probably succeed with them when you try them.—Ed.

FACTS ABOUT GAPES

Gapes are produced by a small worm which is a parasite on the common red worm which the chick eats. Gapes are worse in wet weather because red worms then come out of the ground and are eaten. The gape worm hurts none but small chicks, into whose windpipe it makes its way after being swallowed. The reason chicks do not have gapes everywhere is that there are no gape worms in some places. There is no special cure for gapes. You may draw the worm out of the chick's windpipe with a horse-hair but this takes too much time. The only practical way is to prevent the trouble by keeping the chicks on a wood floor, or sheltered dry ground, where they can get no worms till eight weeks old, when the parasites cease to hurt them. Moving your brood to fresh ground often has the same effect. It would always do so, if you could be sure the new place were not also infected with the gape worm.

WORMS IN FOWLS

There are various kinds of worms that work destruction in your fowls. You often think it is cholera when it is some deadly species of worm. It is said that no less than twenty-five different kinds of tape worms inhabit poultry. The way to get rid of these pests is to thoroughly clean up your premises. If you have any sick, isolate or destroy them. To those not too far gone, administer half a teaspoonful of epsom salts to each fowl on empty crop and follow with teaspoonful of turpentine. Every few days give more turpentine.

GOLDEN NUGGETS

By MICHAEL K. BOYER

CAREFULNESS in dressing poultry pays for the extra pains taken. The pinfeathers must all be removed. The carcass should be dressed immediately after killing. To allow the feathers to remain on for several hours will hasten decomposition.

In France parts of a carcass can be purchased in market—legs, wings, heart, or any part wanted. In this country it is the whole thing or nothing.

How strange that epicures who delight in the white-skinned turkey or duck, should be so set against the white-skinned chicken. But it seems nothing will overrule this prejudice.

Neatness brings buyers. The best always goes first. Quick growth influences quick sales. The markets have a surplus of poor stuff. Poultry buyers are educated—they want the best.

It is a mistake to discard a breed on the supposition that it is not a hardy one. Hardiness can be instilled in any breed by proper housing, proper food, proper attention, and systematic breeding.

The laying hen is not apt to become over fat. Nevertheless, it is a mistake to keep her on a diet of corn expecting her to manufacture eggs from that article. Corn is no egg food.

There is no better germ-slayer than an ounce of carbolic acid added to a pail of whitewash. Give the walls

and ceiling of the hen house a good coating, working it in rather thick in all cracks and crevices.

Fresh eggs find ready buyers and command respect. Bad eggs cause trouble. Spoiled eggs go to the tanners. Condemned eggs, though not spoiled, are sold to the factory for printing calico. Cracked eggs are often sent to the packing houses, where they are separated and canned.

It seems as though nothing is so poorly marketed as poultry. If alive they are in a crowded coop, all sizes and colors. If dressed they are so often unattractive. There is no reason why dressed chickens cannot be put on the market in a more inviting condition. Buyers do not hesitate on price for a nice, clean, tasty article.

Over-exercise toughens the flesh of even a young fowl. A good breast is half the race for a valuable table fowl. A hen bagging down behind is very unattractive as a carcass. The attempt to properly fatten poultry while on a free range, is to throw away time, money and good eating.

In buying feed, remember that white middlings are better than the brown, that white oats are to be preferred to the black, that coarse bran is better than fine, that hulled oats are better than oats with the hulls on, that white corn is not so fattening as the yellow variety, and that Kaffir corn is an excellent grain, and should be more extensively fed.

A favorite cholera cure in the West is made as follows: Red pepper, 2 ounces; powdered asafoetida, 2 ounces; carbonate of iron, 4 ounces; powdered rhubarb, 1 ounce; Spanish brown, 6 ounces; sulphur, 2 ounces. The mixture is made into pellets with flour and water and given three times a day. The mixed powder is added to the soft food as a preventive, giving a table-spoonful twice a week to every two dozen fowls.

"Farm-raised stock" is not always a guarantee of health and vigor. If "farm-raised" fowls are allowed to drink from dirty pools in the barn-yard; if they are compelled to roost

outdoors in all sorts of weather; if they must hunt their grain among the waste in the manure piles; we had rather take our chances from yarded stock. We like to know what our fowls eat and drink, and how comfortable they are at night.

The late P. H. Jacobs once said that outside of the cold storage process, which is too expensive for the farmer, there is no mode of preserving eggs so as to keep them fresh for six months. When we use the term "fresh" we mean similar in appearance to an egg newly laid. Even where the cold storage method is used there is something to observe before the eggs are placed therein, and in any case they differ from those recently removed from the nest. An egg is a perishable article. It may not decay as rapidly as a strawberry, but sooner or later its contents change.

In a paper read before the French Academy of Science, Prof. Balland, some years ago, showed by new and exhaustive analysis, the value of eggs as food and the enormous consumption of this product of the domestic hen. He showed that 25 per cent. of the egg has a nutritive value; the rest is water. Ten eggs without the shells equals just about one pound avoirdupois of meat. During one year Paris consumed 538,000,000 eggs, or something near 125,000 dozens every day. On the basis mentioned these eggs are equivalent to the meat from 168,000 steers per annum, figures that are almost staggering, but true if science is true.

The only absolutely successful way to ship iced poultry is to use crushed ice. It should be shipped in barrels that are strong, with holes in the bottom. First place a layer of excelsior on the bottom of the barrel, then a layer of crushed ice. Lay the fowls neatly together and then cover them with another layer of crushed ice. Keep this up until the barrel is filled. When the top is reached, cover the last layer of fowls with an inch and a half of ice. The finer it is crushed the better. Place over this some excelsior, and

over the top burlap. Poultry shipped in this way will never bruise, and arrives in the market in excellent condition. Ice crushed as it is done for bar-rooms is the kind to use in shipping dressed poultry. The crushed ice seems to form a crust in each layer, and keeps the poultry as sweet and nice as when first shipped.

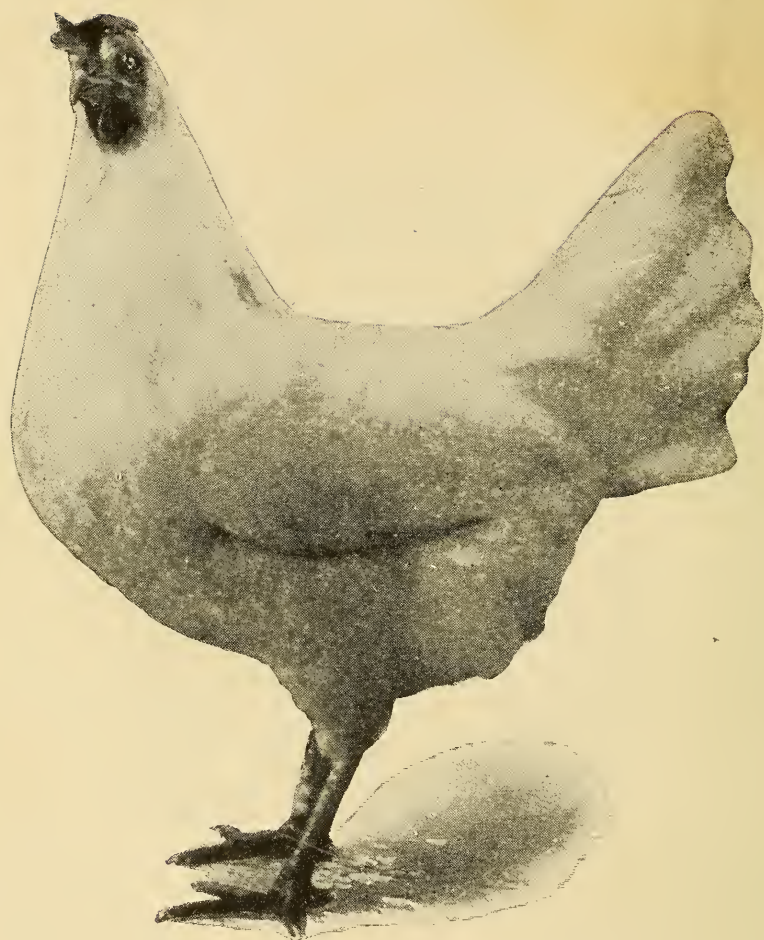
The Ontario Experiment Station made a series of experiments in testing fertility of eggs, and which are interesting. They separated ten laying hens from the male, and placed the eggs in an incubator each day to test them. During the first four days 70 per cent. proved fertile, fifth day 61 per cent, sixth day 60 per cent, eighth day 12 per cent, ninth day 2 per cent, and tenth day all were infertile. Then they put a male with six laying hens which had not been with a male, and tested the eggs in the same way. They found 30 per cent fertile on the third day, 42 per cent on the fourth day, fifth day 50 per cent, sixth day 60 per cent, seventh day 70 per cent, eighth day 68 per cent, ninth day 70 per cent, and tenth day 74 per cent. It would seem then that nearly three-fourths of the eggs are fertile four days after the male is taken away, or a week after the male was put in. There would probably be some difference in the males however, and number of hens might have considerable influence.

GREEN FEED IN WINTER

When scarce in winter a good deal of green feed may be obtained for fowls by soaking and sprouting grain. After soaking 24 hours, spread a thin layer in a wooden box and keep it in a warm place. Moisten the grain daily and allow the superfluous water to escape. In a few days the grain will grow and make a thick mat of soaked grains and green stuff which can be cut off in sections and fed to fowls. It may be obtained with less work and greater facility in a green house. Otherwise the scheme may not pay unless you can't get green feed in any other way.



WHITE LEGHORN COCK



S. C. WHITE LEGHORN PULLET
John F. Childress, Sweetwater, Tenn.

[Copyright 1909 by Herbert V. Tormohlen]

THE LEGHORN—PAST, PRESENT AND FUTURE

BROWN LEGHORNS.



THE Leghorns' first arrival in America is shrouded in mystery. Like many other arrivals from Europe in the early days of the formation of our country they landed without much ceremony, but like our grandfathers, immediately went to work to make a name for themselves. It is generally conceded now that the first Leghorns came to America in 1834. I. K. Felch speaks of a trio being imported by a man along the Mystic river in Connecticut from Leghorn, Italy, in 1853, and he says they were very small and of a color much like the Spanish. Mr. Wright, the English poultry writer, says F. J. Kinney of Worcester, Mass., imported a trio of "Italiens," as they were called in their early day from Leghorn, Italy, in the same year, and he states the trio weighed $9\frac{3}{4}$ pounds. I. K. Felch says he knows of the Spanish and Black-red Game being crossed with them to bring them to the larger size, and he says they also were called Red Leghorns. The breast of the male was originally brown. Then the Standard of Excellence of 1871 called for black, splashed with brown. The neck of the early female was a yellowish brown and the black stripe in hackle could be penciled with brown. The hackle of the male was an orange-red and striped. A. M. Halsted of New York, sent the first Leghorns to England in 1872 to Mr. Wright to be sketched for his poultry book. Mr. Wright suspicioned that they were a cross between the White, (they were imported from England in 1853) and the Grey Dorking, but after breeding them and learning that the Browns were imported from Italy first he concluded they were the pure and that the Whites were produced from "sports."

Of the first hens sent to England, two of the trio sent to Mr. Wright were described by him as being partridge-marked

or brown penciled with dark markings. They had salmon breasts like the present day female. Being partridge-marked they must have been more of what we would call cockerel breeders. The male had a black breast and marked like a Black-red Game, so it is easy to see they had the results in breeding then as we get today. In eliminating the brown breast in the male they produced partridge-marked females, the kind we would not think of showing. The eggs from this stock produced some cockerels very nearly black while one was brown-breasted, showing from what he had been bred. Some of the pullets were of a color like a Silver Grey Dorking, a thing that is not uncommon today when a pullet and cockerel-line are bred together.

W. E. Booney in writing of his Leghorns in 1862 said the eggs which were set the first season produced a variety of results. The first year he got brown, black and dominique from the same pen. The next year also a white. So it is easy to see how the different varieties were formed from the original stock, a matter which we will presently take up. He said further his pullets commenced laying at as early as three months, a statement which might be discredited by the breeder today.

An egg record for five females in 1868 for a year showed an average of 162 eggs. A record which is truly remarkable at that early stage of the formation of the breed.

WHITE LEGHORNS.

The first White Leghorns were imported in 1853 by W. Simpson of West Farms, N. Y. The eggs from this trio also produced varied effects. Some of the stock was dominique and some blue, while more were pure white. All had white legs. In 1868 yellow legs were made the requirement and with some new importations they became more like the present day White with the exception of the squirrel tail and yellow quills. The first Whites sent to England was in 1869. They immediately became very popular there and eggs were advertised in 1872 at ten dollars a dozen. The males at this period all had a straw colored tinge on hackle, back and

saddle. The combs of course on all the early Leghorns were large and beefy, more like a Minorca.

BUFF LEGHORNS.

The first Buff Leghorn we have record of was one shown in Copenhagen in 1885, and then a pullet in the Crystal Palace show in 1888. They seemed to be "happen so" birds, as nothing further was heard of them. To Mr. and Mrs. Lister Kay, of England, belong the honor of producing the first strain of Buffs. While breeding the Brown they imagined in their mind's eye a "yellow" or Buff Leghorn. They had never heard of any and by chance they met a Norwegian fancier who directed them to Herr Heenrich Johansen, of Denmark, as one likely to be able to furnish a start. He knew of none either, but kindly consented to advertise for some yellow Leghorns. Six yellow fowls looking something like a Leghorn were purchased. They immediately killed three as worthless. The remaining three had what we would call only a smattering of buff. To the yellow cock they also mated two Buff Cochin females and by keeping an elaborate stud book and systematic inbreeding they finally produced a typical buff. They state that the original Buff without the Cochin cross was also bred several years, or until 1892, when it was given up as a failure because of the color. The importance of the Cochin can be seen in this. Mr. and Mrs. Kay commenced on the Buff in 1889 and in 1898 they won first on a cockerel at Crystal Palace, which they pronounced good enough to compete with the Brown and White. Mr. August D. Arnold, of Pennsylvania, was the first to import the Buffs to America, making importations in 1890, 1892 and later. They were admitted to the American Standard of Perfection in 1898.

BLACK LEGHORNS.

The first Black Leghorns were imported by Reed Watson, of Connecticut, in 1872 from Genoa, Italy. The eggs from this lot produced all colors like the other early importations. There were brown, white, black, tri-color and some were buff white chicks. He was disappointed with this lot and made

another importation in 1876, having disposed of all of the original stock. They must have gotten into a fancier's hands and perfected before the second importation for they are to be found in the Standard of Excellence of 1875. They became very popular in the 80's and were at their zenith from 1889 to 1894. A club was formed in 1891 with much enthusiasm but in six years it disappeared.

SILVER AND GOLDEN DUCKWING LEGHORNS.

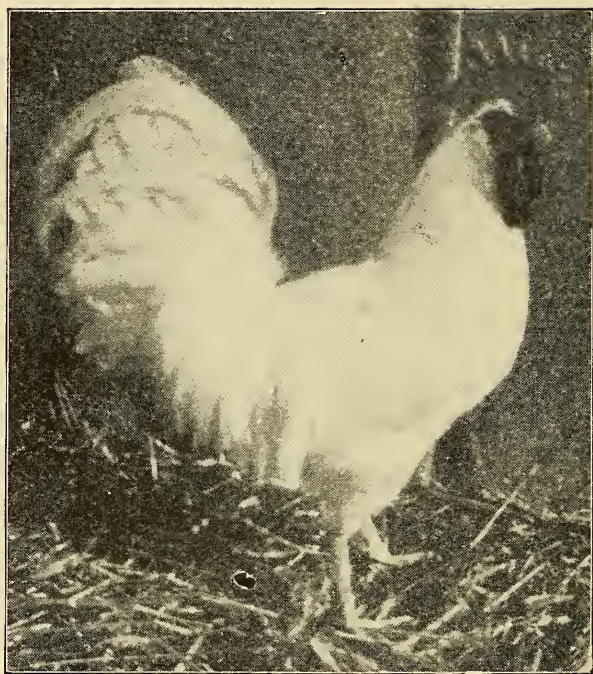
The Silver Duckwing was originated by G. Payne, in England, in 1881. They were shown in the English shows at the time and some were taken to Denmark to show. While there Mr. Payne purchased a Long-tailed Japanese Phoenix cock and crossed them to make better color. The bad effects of the long tail was a draw back for several generations. In England they also show a Golden Duckwing male, but they use a Silver Duckwing female to make this color of a little darker shade, so in reality they are the same breed. The Duckwing is a very showy bird but has not reached the state of perfection that some of the other varieties have. It is much more popular in England than in America. They are very similar in color to the Duckwing game. The chief obstacle seems to be able to breed true to type, and the salmon breast of the female which the Standard requires seems to be very hard to produce.

PYLE LEGHORNS.

The Pyle Leghorn is also an English bird. Mr. G. Payne produced them by crossing the Brown and the White in 1881. They are no better known in America than the Duckwing. The Pyle Leghorn commands a very striking appearance. The male bird has a white breast and tail. The hackle is a rich orange and back crimson red. The wing bows are the same color as the back, the wing bars white, and the secondaries a light red. The breast of the female is a brownish red and all the rest of her plumage as near white as possible. The hackle sometimes shows a light golden tinge. After a few generations the color becomes faded, when it is necessary to in-



S. C. BROWN LEGHORN COCK
J. W. Leeman, Henderson's X Roads, Tenn.



WHITE LEGHORN COCK

roduce fresh blood from the Brown. They were admitted to the American Standard in 1898. They, like the Duckwing, should command the attention of the fancier who wishes to overcome some obstacles, and loves a study of colors as blended in fowls.

DOMINIQUE LEGHORNS.

The Dominique or Cuckoo-colored Leghorn is said to have originated in Denmark. It was shown in England as early as 1885. It was admitted to the American Standard in 1875 and dropped again in 1894. By many it has been confused with the American Dominique, but it is an entirely different breed. Like the Barred Rock in the early part of its career the chief difficulty in breeding is to keep the white barring free from the blue barring.

ADDITION OF THE ROSE COMB.

About 1869 Mr. T. C. McDaniel, of South Hollis, Me., who was then a breeder of Single Comb Browns, conceived the idea of having a fowl with the good qualities of the Leghorn, but with a Rose Comb, as the Single Combs were often frost-bitten up in Maine. He called the new fowl the York fowl at first, but later changed it to Rose Comb Brown Leghorns. The early Rose Comb, like the Single, had rough red ear lobes, but along in the seventies was changed to white.

The Rose Comb White was produced by crossing the Single Comb White with the White Hamburg. The Rose Comb Brown and White were admitted to the Standard in 1883, and have proved a valuable addition to the Leghorn family, especially for colder climates.

In the last few years a Rose Comb Buff and Black Leghorn have been brought to a fair state of perfection.

LEGHORNS ABROAD.

The Leghorn in England today is quite a different bird from her sister on this side of the water. They are somewhat larger. Their combs are like our "old fashion" Leghorns, coarse and beefy. The male's comb follows the curve of the neck like the Minorca's comb. The Brown male's

saddle has very little striping in it, and the female has **very** little if any striping in her hackle. They seem to be what we American fanciers are aiming at in back and wing bow, but Sharpe Butterfield declares some of their wings decidedly grey and some of the flights with two inches of white of the winners he examined at the Crystal Palace show. Some of them also have down between the toes. Withal the American Leghorn, according to our version, is decidedly the more typical of beauty and utility combined, of the two. The Black and Buff Leghorn of England is much the same as our American birds.

The Black as well as the Brown and White are very widely known throughout Europe. Rev. T. W. Sturges in traveling through Switzerland stated that fifty per cent of the fowls there were Black Leghorns and were used entirely as egg producers. He stated that the Swiss called them Italiens as we first called our Browns. Lately in reading the German book upon poultry written by Durigen in 1886 he states that there they are called Italiens or Leghorns. Also South America, Australia, New Zealand, and even Japan have imported eggs from the United States and their Leghorns are on the same high order as our own exalted fowl. The Leghorn has won her way to the hearts of the people of Australia by the place she took in a notable egg-laying contest in which she took part.

What the Leghorn of tomorrow will be is left in our hands as breeders and fanciers. As I have repeatedly stated the Leghorn won her reputation by the great number of large white eggs she could lay in a year and on account of the minimum amount of feed consumed. There are plenty of other breeds and varieties that claim first honor at anything from an egg contest to being a beef steak or turkey roast. Let them challenge and dispute. If we breed our Leghorns in the future medium size and smooth, compact, five-pointed, medium-size combs with an eye to conforming to their symmetry, and with the long (not too long) back, which seems to be an essential to great egg production, and with a general view to

symmetry, beauty and utility, our beloved Leghorn will still remain the world's chief egg producer.

Personally I have bred the Brown, White, Buff and Black, and of the strains I had I found the Brown and the Black the best egg layers. I also liked them better because they kept their beauty throughout the year and did not fade or show dirt so easily. It is all a matter of fancy as to which variety you should choose. Don't try to raise more than one though, unless you are an experienced fancier. Show your birds. Boost them. Advertise. The second year after having the Browns I showed five birds and won everything, and I had some old competitors, too. Since then I have won at some of our National shows.—H. V. TORMOHLN, Indianapolis, Indiana.

DATES OF INTEREST IN LEGHORN ANNALS

1834 First Leghorns imported to the United States. (The Browns.)

1853 Second importation, by parties along the Mystic River, Conn.

1853 F. J. Kinney, Worcester, Mass., imports trio. Weight, $9\frac{3}{4}$ pounds.

1853 W. Simpson, West Farms, N. Y., imports trio of Whites from Italy.

1860 White Leghorns take yellow legs as a characteristic.

1862 W. E. Booney says pullets hatched were different colors and layed at three months of age.

1869 White Leghorns in W. Simpson's hands made average of 162 eggs for the year with five pullets in the pen.

1869 T. C. McDaniels, South Hollis, Me., perfects strain of Rose Comb Brown Leghorns.

1869 First Whites taken to England.

1871 Browns and Whites described in Standard of Excellence. (American.)

1872 Eggs for hatching in England advertised at \$10 per dozen.

1872 First Browns sent to England to Mr. Wright to be sketched for his poultry book published in 1876.

1872 First Blacks imported to America from Italy by Reed Watson, of Connecticut.

1875 Blacks admitted to the American Standard of Excellence.

1876 Second importation of Blacks which proved better breeders.

1883 Rose Comb Browns and Blacks admitted to the Standard.

1883 Some important changes in Standard for Brown Leghorns.

1889 Buff Leghorn strain started by Mr. and Mrs. Lister Kay, of England.

1890 August D. Arnold, of Pennsylvania imports first Buffs.

1889-1894 Blacks very popular in America.

1891 Black Leghorn Club organized.

1898 Buff strain perfected by Mr. and Mrs. L. Kay.

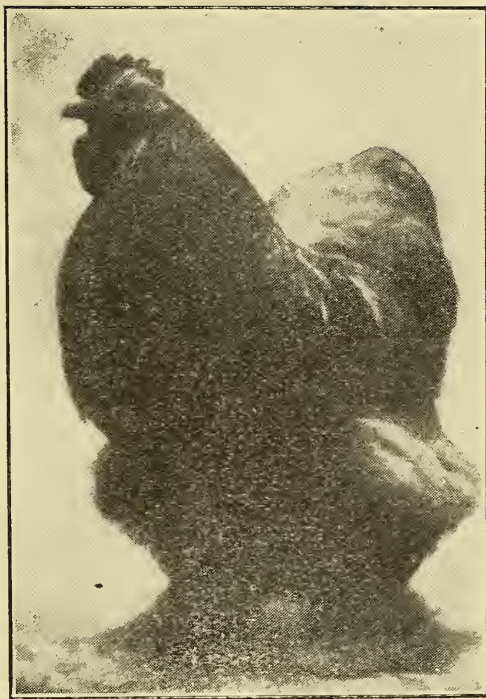
1898 Buffs and Silver Duckwing admitted to Standard.

—Compiled by H. V. TORMOHLEN, Indianapolis, Ind.

WARDING OFF DISEASE

Poultry is subject to the same laws of health and disease as pertain to the human family. Pure air, pure water, pure food, and cleanliness are necessary in both cases. The fowl's power to resist disease is measured by its constitutional vigor the same as in man. Food in amount and quality must be right in each. Both succumb to the ravages of certain gum diseases when the power of resistance is weak. Imperfect digestion also fills the system with poison. In either case the highest science and the greatest care are necessary to the preservation of health.—T.C.K.

Look after the proper culling of your flock at all times. Imperfect cocks and non-laying hens sink profits and should be turned into cash at the first opportunity.



BUFF COCHON COCK

Bred by Uncle Sam's Poultry Yards. Pleasant Hill, Ohio



BUFF COCHIN HEN

Bred by Uncle Sam's Poultry Yards, Pleasant Hill, Ohio

286 EGGS IN 365 DAYS



ACTUAL figures from carefully kept records, showing what is really produced and what it costs to produce it, are of the greatest value to all engaged in the poultry business, particularly to those just starting or who intend to engage in poultry keeping. The following is a carefully kept record of a remarkable S.

C. White Leghorn hen and her thirteen daughters. This bird bids fair to be as remarkable as one we read of in Germany. On the occasion of her laying her one-thousandth egg, the mayor of the village where she lived proclaimed a holiday and all the inhabitants joined in a celebration of the hen's great record. Tennessee may well be proud of having such a hen and such progeny. These birds were raised on the Nola Chucky Poultry Farm, near Morristown, Tenn. With not only a high laying record but also the power to transmit this quality, who can compute the money value of such a hen. The egg record for our 286 egg hen is as follows:

Hatched April 20, 1905.

Laid her first egg August 27.

On April 20, 1906, she had laid190

Eggs laid to April 20, 1907286

Eggs laid to April 20, 1908220

Eggs laid to January 22nd, 1909168

Total864 eggs
in three years, nine months, and two days.

This is correct to the best of my knowledge and belief.

CLAYTON I. BALLARD.

Egg record for thirteen hens, for twelve months, 1908:

Jan.	270	May	303	Sept.	172
Feb.	288	June	300	Oct.	228
Mar.	319	July	271	Nov.	284
Apr.	310	Aug.	246	Dec.	296

Total 3,287 eggs or 273 dozen at an average price of 25c

per dozen, makes a total of \$68.25. The cost of feeding these thirteen hens and one cock was \$19.25, as follows:

Corn, 5 bu. @ 60c	\$3.00
Wheat, 8 bu. @ 90c	7.20
Middlings, 200lb @ 1c	2.00
Bran, 200lb @ 1c	2.00
Corn Meal, 200lb	2.40
Meat Scraps	2.00
Oyster Shell .....	.65

Total \$19.25 or \$1.37½ per head cost of feed, leaving a balance of \$49 net; or about \$3.77 each per hen for twelve months. An average of over 252 eggs each per hen in twelve months. This pen of thirteen hens had free range but no extra care. I gave system of feeding and care in the November issue of *THE INDUSTRIOUS HEN*.—CLAYTON I. BALLARD, Morristown, Tenn.

UTILITY BIRDS

The farmer especially wants utility birds—those that bring results in the way of eggs and meat. He does not care so much for feathers and form. Yet to these he can have no objection, other qualities being equal. The farmer's flock should also have strong vitality. If he can get birds that have been bred with a special view to vitality, so much the better. It stands to reason that his fowls can not have the same careful attention which the fancier bestows. His birds are usually expected to do a good deal of shifting for themselves and will need more vitality to back them. This does not mean that scrub fowls should be adopted. Specimens can be selected from the pure breeds whose blood has not been impoverished by form and feather breeding alone. Vigor and vitality must be main characteristics if we expect a high order of eggs and meat production.—T.C.K.

A poultry woman on one the largest farms in Utah prefers White Leghorns and Plymouth Rocks as utility fowls. The former eat less, she says, than any other breed.

S. C. WHITE LEGHORNS IN JAPAN



EVERY breeder of S. C. W. Leghorns will be interested in knowing that in the development of poultry culture the Japanese are following the American ideas, and that their most successful poultry plants are devoted to S. C. W. Leghorns, the greatest egg producers known. Japanese fanciers use the American Standard of perfection, these having been literally translated into Japanese. In judging they use the score card, and the purpose of the judges is to apply it according to the Standard. The management of poultry is almost wholly by the intensive system; "very intensive it is too." But in Japan there is a reason for this which does not hold here in the South. The Empire of Japan about equals in area Tennessee, Kentucky and Georgia and has a population of nearly 50,000,000, about half as many as the whole United States. Nor does that statement tell all the story. Much of the land in Japan is not tillable. Every foot of tillage land in the Islands has been (it is said) under cultivation for hundreds of years, hence the Japanese poultryman has to keep his fowls closely confined. There are three poultry plants in Japan, each keeping 10,000 or more S. C. W. Leghorns. These are all said to be established long enough to demonstrate the venture as successful. The oldest of the three has been running for over twenty years. On these plants the average yard-room per fowl is but twelve square feet, expressing that statement in the terms generally used in this country. We have a yard say 10 x 30 feet for twenty-five fowls or 3,630 hens per acre. Keeping land clean is quite a problem. Every two weeks the yards are thoroughly swept and the houses and fences whitewashed twice a year. A still more thorough cleaning includes the turning over of the soil in yards. The houses and fences are of wood and quite similar in construction to those in use here. The feed-

ing of fowls also is on the same line. The principal difference noted is that while with us corn is the staple food, with them it is rice, and for animal food they feed a great deal of fish and fish waste, while with us meat products are used. Both clover and alfalfa and the waste of many kinds of vegetables are used for green food. Oyster shell is given freely. The cost of feeding a fowl is given at about forty-five cents a year, which, considering the difference in the purchasing power of money, is equivalent to ninety cents here, as against our usual average of about \$1.25 per fowl per year. Eggs are relatively high, the usual price being about three cents each.

The average egg production, I understand is rather lower than ours. The profits, less the expense, are about the same there as here.

The photo shown is Madam Takai of Osakashia, Japan, one of the leading White Leghorn Breeders.—CLAYTON I. BALLARD, Morristown, Tenn.

WHITE LEGHORN FARMS LARGEST IN THE WORLD

The Leghorns in general hold the same place among fowls that the Jersey does among cattle, and like the Jersey they give the largest returns for the least expense in housing and feeding. When Leghorns are well fed the surplus does not go to fat, inducing sluggishness, but to increase egg production, so that for the year round they are producers of large white eggs, which always receive the highest quotations. She has no equal, this is plainly demonstrated by the fact that the largest egg farms in the world are entirely stocked with Single Comb White Leghorns—the egg machines of the present day. While their bodies make small carcasses as dressed poultry, they rank high in quality, as the meat is fine grained, sweet and tender. As they mature so rapidly they can be raised to the broiler age very cheaply, being always plump, even when very young and small. In regard to the eggs hatching strong chicks, we say that if the stock is

the right sort there are no eggs that will hatch equal to the Leghorn eggs. And the chicks are hustlers from the start. At the age of five and six months the pullets are beautiful with their snowy plumage and gay combs, are ready to lay eggs, which will pay for their cost and keep before most other breeds have had a thought of the debt they owe.

There are two questions which must be considered in egg production as a business. One is, how much does it cost to grow a hen to a laying age? The other is, how much does it cost a year for her maintenance? There is no profit in a 200-eggs-a-year hen, if it costs more to produce the 200 eggs than they will bring on the market. It is a fact conceded by all breeders of the heavy varieties that one can keep five Leghorns on the same amount of food that three of the larger breeds will require.

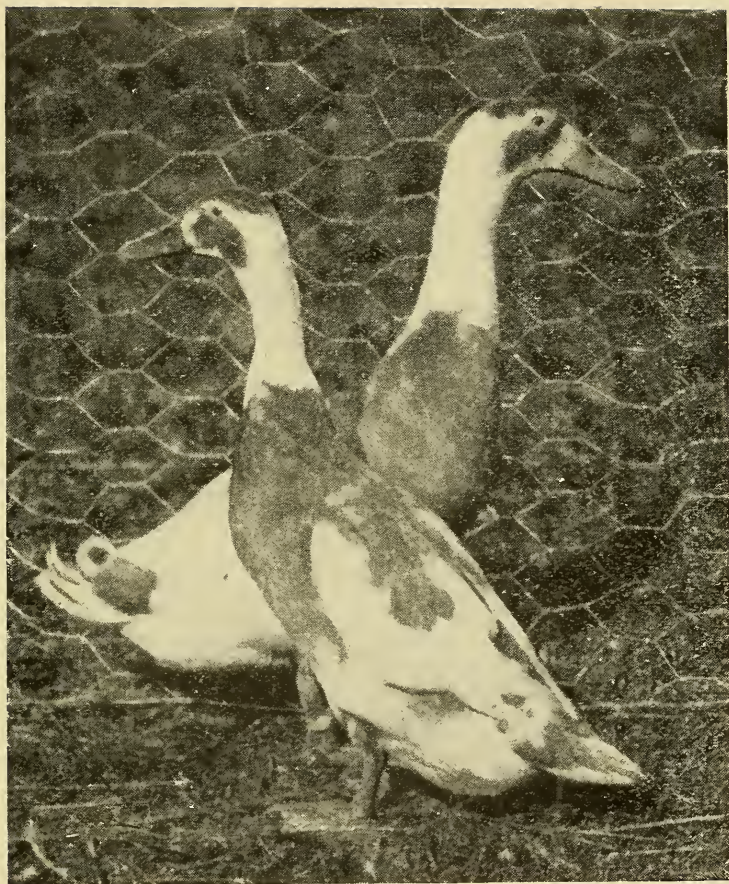
The question of housing is also one of importance, for the egg farmer or the fancier. Naturally they do not require the space in a building that the larger birds must have. That a Leghorn is a nervous bird can not be denied; she would not be a Leghorn, but turns this nervous energy to good account, as she is continually exercising, and hustling after feed that would otherwise go to waste. By this hustling she overcomes the difficulty of taking on too much fat to be profitable as an egg producer; while with the heavier breeds this is quite a serious matter, as they are willing to sit still and consume what is provided for them, but are not willing to exercise enough to prevent becoming over-fat. On Chick-a-Dee Farm, the home of the writer, all these above mentioned experiences have been learned by actual testing along side by side with various other breeds, covering a period of several years. All chicks hatched, intended for breeding purposes are hatched and reared, by natural methods; raised on the colony house plan; having free range, and are fed a balanced ration, all of which my years of experience in poultry breeding has taught me that it takes to produce a properly developed bird, that will produce and reproduce itself.—J. A. DINWIDDIE, New Market, Tenn.

SOME HISTORY ABOUT INDIAN RUNNER DUCKS

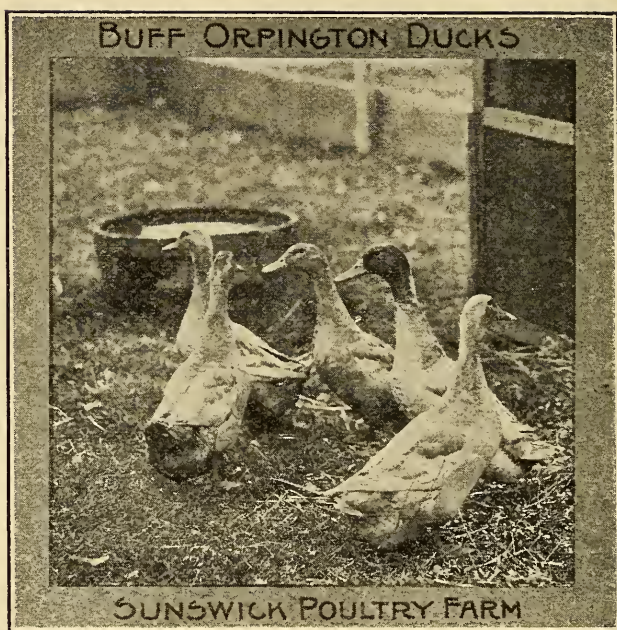
ABOUT the year 1848 a ship's captain from the northern coast of England, who noticed their peculiarities when ashore on the coast of India, decided to bring a few Indian Runners home as a present to some of his friends. It was this fact, together with their quick running gait that gained the name of India or Indian Runners. For more than sixty years the breed and the name were known only locally in the county of Cumberland. In the last six or eight years American fanciers have imported ducks from England. But up to 1907 they were little known here in the South.

CHARACTERISTICS OF INDIAN RUNNERS.

Shape and carriage are the first points to look for. A perfect bird should have a well rounded body, somewhat bottle-shaped, narrow, lengthy and very tightly feathered, the legs being placed much farther back than in the Wild Mallard or the common domestic duck. The front of the body is greatly elevated in order to enable the bird to balance itself properly when running, or when on the alert. The shoulders are close and the wings are carried close and nicely tucked up under the flank feathers. Behind the legs the under line of the body swings gradually around to the tail, which is close and neat, and in some excellent specimens a trifle elevated and slightly out of line with the body, but not turned up like the Pekin's. From the legs to the shoulder points the body is of nearly uniform width and thickness; but from the shoulders there is a gradual funnel-like tapering to the thinnest part of the neck. The neck is of good length and very fine. The head is unlike that of any other breed and should be wedge-shaped. The eyes are placed unusually high in the skull, which is somewhat flatter and lower than in the common duck. The bill is deep at its base, fitting well into the head and should be carried out strong, full and level to the tip. The upper mandible projects well over the lower one making the bill appear rather thick towards its extremity. In comparison



PAIR OF INDIAN RUNNER DUCKS.
Clayton I. Ballard, White Pine, Tenn.



BUFF ORPINGTON DUCKS

As Bred on Sunswick Poultry Farm, South Plainfield, New Jersey.

with ordinary ducks, a good Runner appears longer and thinner, and the impression is heightened by the erect carriage and the fact that the bird when on the alert carries neck and body almost in a line at an angle of 45 to 80 degrees to the horizon—the higher the better. The feet of some of the best Runners are rather smaller than those of the common breeds.

COLOR OF TRUE INDIAN RUNNERS.

Color has been a stumbling block to many fanciers. In the duck the correct color is a warm, sunny fawn, neither a pale, washed-out drab nor a dark, cold, dusty gray or brown; but a rather light brown with a flush of golden sunshine running through it. The colored body feathers are laced or penciled, the ground being of a rather duller and more indistinct shade than the margin of the feathers. Some fanciers appear to be under the impression that the feathers of the duck should be perfectly plain without any trace of lacing, but this is quite a mistake and certainly not desirable. The real ginger fawn has nearly always been associated with the most perfect shape and carriage and to me is more attractive than any other color. The body feathers of the drake are of a light fawn color, minutely penciled or peppered with dark lines and the color is hardly of such a soft, warm shade as the duck. At the front of the breast towards the throat the color frequently deepens a little. The head and lower part of the back are a darker shade, often showing a faint greenish color, and the tail approaches the color of the body. The coloring of the bill varies somewhat with the seasons and the condition of the bird, that of the adult duck being a dull, deep cucumber green when newly moulted and the drake shows a somewhat lighter shade. The legs and feet are usually a deep yellow, but some show splashes of tan or brown. As an exhibition breed the Indian Runner promises to outrival all competition, and in this direction I believe the greatest step is yet to come. There are so many points about it to captivate the fancier and hold his attention.

There is room for careful and systematic breeding and ample opportunity for the display of skill in mating and selection. From the day that the eggs are hatched to the time the ducklings are grown, it is a source of pleasure to watch their good qualities unfolding.

UTILITY PROPERTIES OF RUNNERS.

The Indian Runner duck is not only unique from a fancier's point of view, but for the utility man it fills a gap that no other breed ever has. It is the greatest forager and the most prolific laying breed of domestic ducks in the world. The light get-up, running gait and remarkable vitality it possesses gives it a great advantage over the heavier breeds. It is a ceaseless worker, quick, alert and ever on the move. In the moist and showery days of spring they will range far and wide seeking out insects and small animal life. The keenness and action shown by a flock of Indian Runners on the hunt, and the amount of ground they manage to get over is a revelation to those who have kept only the heavier breeds. Farmers often have the most favorable conditions for keeping a flock of ducks. Pastures and stubbles are ideal hunting grounds for Runners and where they have a good range the cost of handling and feeding is almost nothing.

As a table bird, the Runner cannot be classed with any other duck, which can be fed up to great weights. The Indian Runner seldom exceeds five pounds. Many people think that for this reason it is useless to rear Indian Runners for table purposes. Their appearance is somewhat deceptive, as they are much closer feathered than other varieties and are really well fleshed. The quality of the meat can hardly be surpassed. Runners are not adapted for close confinement in small damp runs. If kept well supplied with oyster shells, beef scraps and green stuff, a pen may be kept in a comparatively small grass run with success.

They require little water and with an occasional bath will keep in excellent condition.

HOUSING INDIAN RUNNER DUCKS.

No elaborate houses are required. A roomy house, with a dry floor and plenty of ventilation, but protected from cold, sweeping winds are all that is needed. In warm climates they do better in the open air. They can stand a wide range of climate and temperature if kept under common sense conditions. But where severe winters are experienced and the ground is frozen hard they must have a liberal supply of animal food and green stuff. Here in the South an open shed is all that is required in winter. They do better to roost in the open air during the summer months. After sixteen weeks of age we never give our ducks shelter winter or summer.—CLAYTON I. BALLARD, Morristown, Tenn.

ABOUT INBREEDING

The merit of inbreeding all depends upon how it is done. Much care must be exercised in mating, even with pure breeds and a fine strain. Some birds are diseased or lacking in vigor and should be discarded. Others have defects in form or color or laying qualities and these also should be kept out of the breeding pen. The progeny of no flock is without some defective specimens which need to be culled out. The so-called running out of poultry from inbreeding comes from lack of care in mating. Proper selection will build up a flock constantly, while promiscuous breeding will as surely run it down.

Growing ducklings thrive best on a feed composed of equal parts, by measure, of cornmeal, ground peas, bran and middlings, all made into a thick mash, either with scalding hot water or milk, the latter being the best. The mash is improved by adding short-cut green grass, clover or some other green stuff, and a few handfuls of coarse sand.

WET FOOD AND MASHES HAVE THEIR USES

Wet foods and mashes claim but little attention of late on our farm for the reason that dry foods have proven of so much better value. However, we do not discard the feeding of mashes altogether because I find an occasional feed of mash is highly relished by the chicks. But our main feeding consists of dry, well balanced grains. The hopper method of feeding chicks of all ages has become so satisfactory we seldom ever feed any other way except the young growing chicks. I am thoroughly convinced an occasional feed of well prepared mash is good, but if it is fed to an excess it will result in more or less harm, hence, we never feed it except occasionally for a change.

I must confess that possibly some have contracted somewhat of an exaggerated idea of the value of the automatic hopper feeding. The writer has given through the press his experience in feeding fowls with the automatic feeders, but I am quite sure, (judging from the tone of many letters we have received recently asking various questions upon the subject), some have conceived quite an exaggerated idea of the value of feeding with automatic feeders. I will say briefly that the secret of feeding with the use of automatic feeders is that you establish a sure method for liberal exercise which is very valuable for confined fowls. Of course they save feed and are valuable in many ways, but I like to feed chicks otherwise, and give an occasional feed of mash. Last season I don't think we fed a single feed of wet food to our chicks, and while they did quite well on an exclusive dry grain ration, yet I am confident I can detect a marked improvement in the growth and development of our chicks this season over our chicks last year with an exclusive dry grain ration. I am quite confident, after chicks are two weeks of age you can feed a mash at least once a week with best results. I am not an advocate of the old sloppy cornmeal mash, fed to the exclusion of everything else, but an occasional feed of cornmeal, wheat, bran, table scraps,

meat scraps, seasoned with pepper; a mash of this kind fed once a week to chicks will develop and mature them faster than otherwise, I am quite sure. There are many feeds chicks will do well on. Yet you must use good judgment in feeding various articles. A well balanced grain ration is the best ration known for chicks—I say in the main, grain is without a peer—but I know from experience that a mash food intelligently prepared and fed once a week will prove of great value in the growth of young fowls. And for laying hens it has a place. The general principles and results are the same.

I am quite certain many have an exaggerated idea about the hopper method of feeding, especially with those that are inclined to be troubled with a touch of laziness. The hopper feeders are all good and should be on every farm, and if you will try an occasional mash, you will find it profitable.—J. C. CLIPP, Saltillo, Ind.

HOW I CARE FOR BREEDING STOCK

Above all give them a good shelter, a house boarded up tight on the north, east and west, with plenty of ventilation without drafts. I prefer to leave the south open and screen the same with one-inch mesh chicken wire.

Place roosts on a level to keep the chickens from all trying to roost on the highest pole; put drop boards underneath to catch the droppings, and plenty of good, roomy nests underneath the drop boards.

Now provide some dry place where you can put four or five inches of clean straw or leaves for them to scratch in, and throw all grain into the litter. Keep grit, ground oyster shells and charcoal before them all the time.

Provide green food in some form for them all the time, winter and summer. Sow winter turf oats and rye in September and dwarf Essex rape in March and April. Turnips, beets, cabbage, lettuce, all are good for them. Sprouted oats make an ideal green food.

Provide meat in some form, such as beef scraps, or lean

beef ground, about once a week. I prefer to feed wheat in the morning, heavy oats at noon and corn at night. (Feed the corn only in cold weather.) I feed a dry mash in hopper, or moisten it so it is crumbly and give them one feed of it every other day. The mash is composed as follows: 200 pounds wheat bran, 100 pounds corn meal, 100 pounds middlings or seconds, 100 pounds beef scraps, 100 pounds short cut alfalfa or meal, 100 pounds ground oats, boiled turnips, potato peelings and all the table scraps thickened with the mash is good for them. Do not feed green bone if you want fertility.

If your stock is strong and vigorous you will get fertility with this feeding. Of course you must provide fresh drinking water three times a day, and scald drinking vessels out once a week.

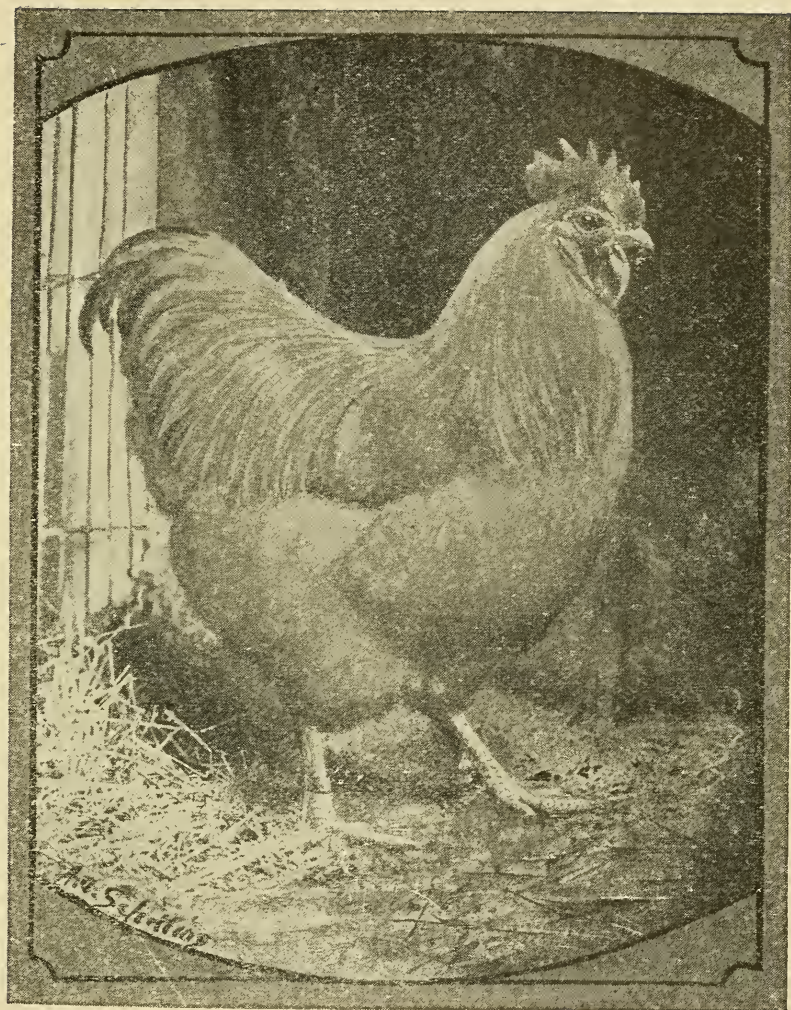
To force laying when you do not need fertility, feed as above, and feed green cut bone twice a week. A good grade of mixed scratch feed will do in the place of wheat, oats and corn, if you will add one sack of good, sound wheat to four of the mixed grain.—D. E. MACGOWAN, Cherry Red Poultry Yards, Memphis, Tenn.

INCUBATION ON THE FARM

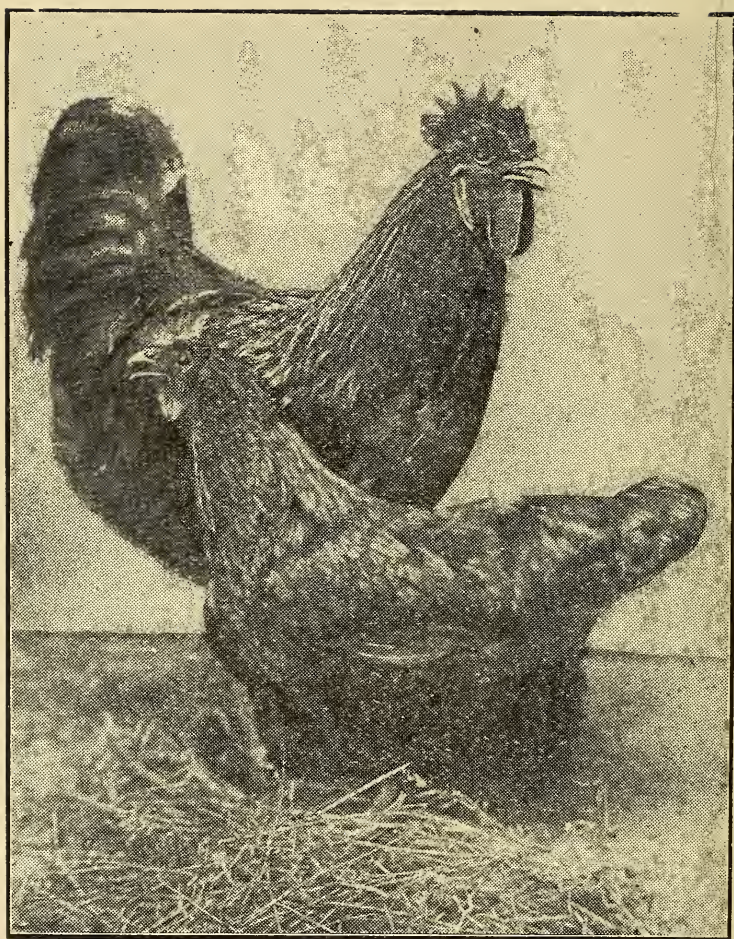
Should the farmer use an incubator? That all depends upon how many eggs he wants to hatch and how thoroughly he is going to do the work. An ordinary number of eggs would better be left to the hen; and an incubator not properly managed is worse than none.

An incubator may be profitably used where you want to keep your hens laying, or when you desire to make a hatch out of season and have no broody hens, or when you want to sell small chicks or raise fryers and broilers in large numbers.

Somebody says an incubator won't break its eggs or go off and leave them like a hen. Maybe so; but I know of one incubator that lately hatched only four eggs out of one



SINGLE COMB BUFF ORPINGTON COCKEREL
First at Madison Square. Owned and bred by
Wm. Cook & Sons, Originators of all the
Orpingtons, Scotch Plains, N. J.



BLACK ORPINGTON COCKEREL AND PULLET.
Paul & Hubert Mason, Shellman, Ga.

hundred and fifty. But it wasn't the incubator's fault.

Some chicken people are always introducing new blood into their flocks. Better take more care in keeping pure that which you already have. Do this by culling out all imperfect specimens.

Keep fine charcoal around the coops and in the little chick runs. You have no idea how much the birds will consume and how it helps their digestion. There is little diarrhea where the chicks eat charcoal.

Very few farmers take care of poultry manure as they should. Every hen produces at least 50 cents worth a year. This manure will make 60 cents worth of vegetables and grass. Therefore the manure from 300 hens will add \$180 to their egg and poultry product of \$420 a year, making in all \$600 a year for a flock of 300 hens. Some families live on much less than that sum.

APOPLEXY IN CHICKENS

Apoplexy in poultry usually comes from over-feeding on starchy foods and can rarely be cured. If the bird is very valuable, proceed as follows: Open the large vein under the wing, and hold the bird's head under a cold water tap for a minute or two; if it shows signs of recovery feed it sparingly for a few days on soft, light food and give five grains of bromide of potassium each day.

Roup may be apparently cured, but it cannot be entirely eradicated from the system. It is apt to break out again, and also be transmitted to the young. Under no circumstances should fowls ever be used in the breeding pen that ever suffered from contagion in any form.

A writer some years ago truthfully said that more is lost to the producer of dressed poultry, eggs, butter, vegetables and fruit, through sending them to market in improper condition, than would be required to pay the national debt.

SOME OF THE ADVANTAGES OF CAPONIZING

TO begin, we find that Webster's Dictionary defines the word *capon* as a male chicken gelded or castrated to improve the meat for table use.

Of course it will be understood that adult or fully developed specimens are seldom used as capons, for two reasons: First, like males of other animals neglected as to castration, the blood vessels and arteries are fully developed and to sever such veins as is necessary in the operation, would in many cases result in death by bleeding. Second, should the operation be successfully performed, there would be but little room for additional growth, and the meat would possess a strong or unwholesome taste and flavor. Therefore a specimen weighing not less than two pounds nor more than three pounds is most desirable and best adapted. The smaller the specimen the less the loss of blood.

Good, healthy cockerels should be selected. No droopy or indisposed birds should be used.

Do not be afraid to caponize your pets, as it will make them even greater pets and give them more advantages and larger lives than if hustled off to market, confined there in sloppy coops, and deprived of feed except perhaps a green dough fed by careless feeders. For after being caponized they become greater eaters and are termed scavengers for poultry yards, eating such remnants as other chickens leave or do not like.

They are rendered much more agreeable by this operation and when a clean job is done they never crow any more, nor do their combs grow, or appear red or rosy; but on the other hand their combs will apparently dry up and look pale, and the bird will appear sluggish and at no time show any disposition to fight. They enjoy the company of very small chicks. If put in a dark corner until the chicks and a capon "take up" together, he will brood from thirty to fifty chicks, clucking, scratching, and otherwise caring for them with as much constancy as the old mother hen until the chicks are

removed. In fact the advantages are in favor of the capon, as he never weans them so long as they will stay with him, while the hen often weans before the little ones are half feathered, and commences to lay another clutch of eggs, leaving them in many cases to actually suffer in cold weather for want of proper hover. The advantages of capons for brooders should be most highly appreciated by persons who are bad brood managers, or who have what is termed "bad luck" with artificial brooders.

But it is more of the commercial value of the capon that we desire to call attention to in this article, and especially at this time when general interest in poultry and poultry products is advancing by leaps and bounds, so to speak, upon every side and in every direction.

Many uniformed persons treat lightly the claim that the poultry and eggs product is out-stripping any other commodity in our commercial doings. But we have only to reflect that producers are in such a rush to get on to the nearest market, and that the dealers and consumers are so persistent with their demands, that the additional profitable results are not obtained that could and would be realized by a more systematic feeding of the general line of poultry and by specializing as to capons, etc. For example from East Tennessee alone from two to four car loads of poultry are shipped and sold in Washington every week in the year, to say nothing of the number of cars in the remainder of the train load that go on to Baltimore, Philadelphia, and New York—all from East Tennessee—and with all this seldom ever a shipment of even a dozen capons. At this, the spring season, there is not a capon on the Washington markets, and only a very few obtainable anywhere for other Eastern markets, while in Washington they are quoted at 25 to 35 cents per pound, and in Baltimore, Philadelphia, Boston, and New York, from 30 to 50 cents per pound.

With all these facts before us, and in view of the general clamor about conserving misused opportunities, it is conclusive that the farmer of today is letting slip through his

very hands a chance to increase an already established commercial factor, by not caponizing the many cull and unnecessary cockerels at the proper age, which as has been demonstrated, will result in an addition of at least one-third to the weight of the ordinary full grown male, besides producing the most wholesome and profitable fowl flesh or meat in existence.

After the bird—caponized—is fully grown, a leaf of yellow fat forms about and around the carcass which, when roasted, imparts a most delicious flavor.

While the art of caponizing has been in vogue for several hundred years in China, Europe, and other foreign countries, it would seem that the American people have been too busy until within the last few years to devote the necessary time to the development of such enjoyable luxury.

There are two points certain: First, capon is the very best and most palatable fowl meat. Second, nothing is too good for the American people; the only fact that seems perplexing is, why don't they raise it?

Even though a farmer raise only a dozen or two dozen for home use, he would be amply repaid for the trouble and expense. The tools cost from \$2.00 to \$2.50, and can be procured of the Geo. P. Pilling Co., Philadelphia, Pa., who put up first-class goods and are reliable people to deal with. After one or two operations, the work becomes delightful, but even a greater delight awaits the operator when later on the large, juicy capon roast confronts him on his own table, when it is served to his guests and family.

We urge every farmer and all poultry raisers for that matter, to try this new field of industry, and thus help themselves to another of the good things of life.

As to the work and its proper execution, the people supplying the instruments will furnish free upon application their catalogue and book giving every detail of the work, by carefully observing, which even a boy cannot fail to do it successfully.—THOS. E. MCLEAN, Knoxville, Tenn.

THE OPPORTUNITIES OF POULTRYMEN

How foolish it is to think there are no chances to get on in the world at the present time like there were in grandfather's day! There are a hundred now to one of that time. Look around you and consider and you may be sure it is true.

Think of the chances in poultry now compared with those of the old days. There was no market then except in the one nearby town and very little there. The farmer did well to get 5 to 8 cents a dozen for his eggs and most people thought poultry too little a business for them to think about. There were no great poultry plants and poultry journals in that day. There were no famous breeds or poultry science. The man who would have set up to make his living out of poultry would have been set down for a lunatic.

What did grandfather know about poultry wire or poultry runs? To have proposed an incubator to him would have been flying in the face of nature and the acme of folly. In fact it would have been considered sinful. He never even dreamed of grit boxes and feed hoppers, the great labor savers of today, which make profit with great numbers so much more practicable. To him, your modern bone-cutter would have been unspeakable. And a trap nest—that would have been the last straw on his credulity.

BOWEL TROUBLE AMONG CHICKS

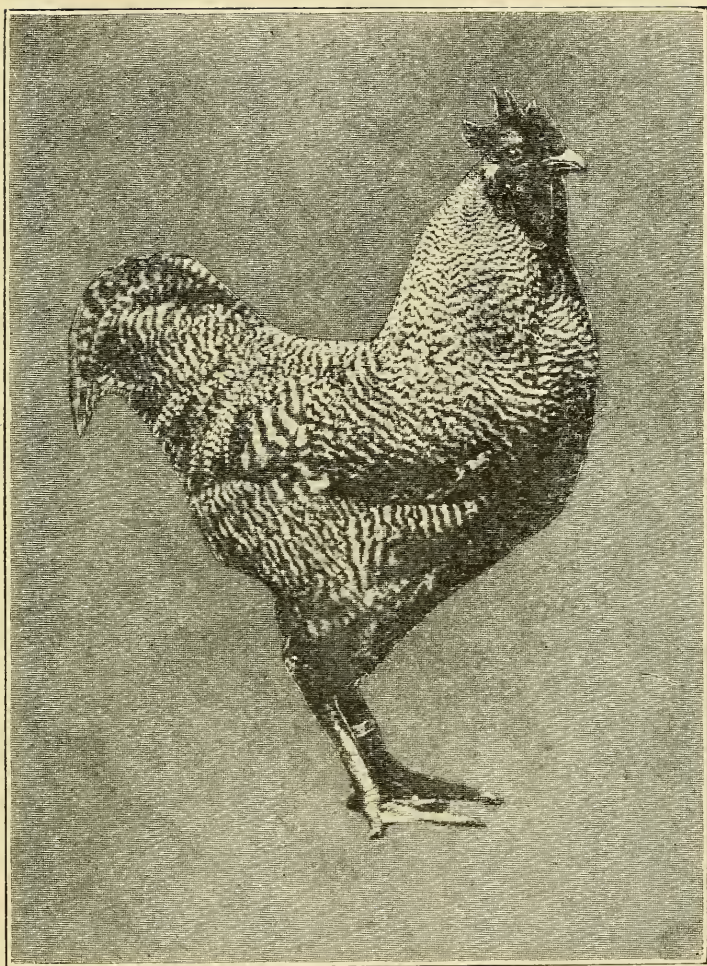
When the chicks are attacked with bowel trouble, feed them small broken charcoal or rice boiled in milk until almost dry. Equal parts of ground ginger, clove, cinnamon and ceyenne pepper—a teaspoonsful for each dozen chicks in the mash—is recommended when the trouble becomes pronounced. This may be given once each day for two or three days. It is not only a good corrective, but it serves as a tonic for the little birds which have been housed in damp quarters. Another excellent remedy is a teaspoonful of clove tea in each pint of food every other day until the trouble is corrected.

PULLETS VS. OLDER HENS FOR EGG PRODUCTION

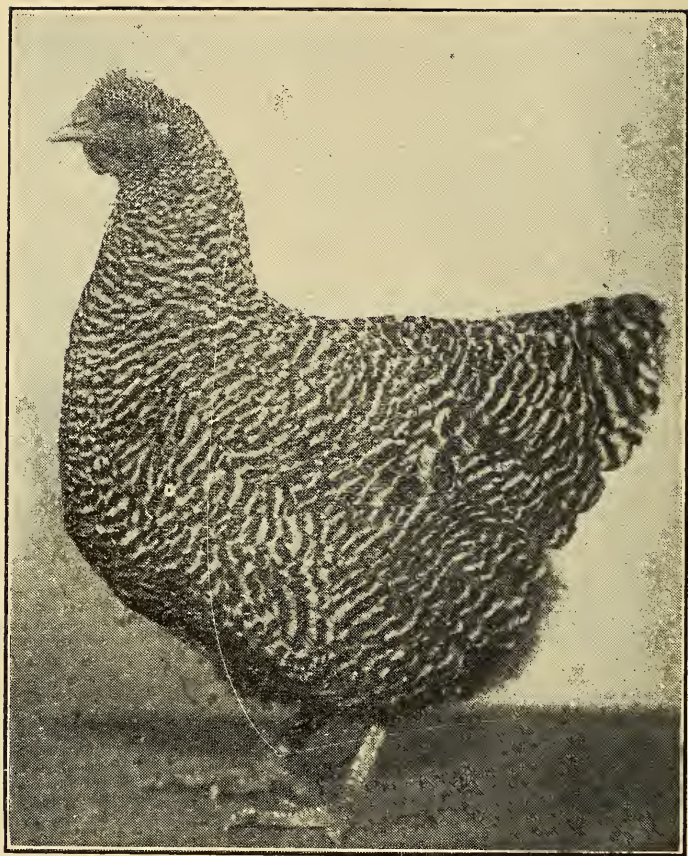
EVERY now and then we hear some one advise, "Don't use anything but pullets for winter layers; if you want winter eggs, kill your old hens," etc., etc. How about it? I have bred utility poultry for several years and until two years ago I followed much of this advice. Mrs. S. had five or six Brown Leghorns given her by her father. Let's see; yes, it was five or six years before and they were hens then. They were laying in the spring and had laid all winter. Here was a pretty strong argument for hens vs. pullets and we decided to keep them as long as they paid. So we began keeping "tab" on them the first of May, 1908. I have a record of them every day for the twelve months to May 1, 1909. One of the six died early in the winter or late fall, but their egg record for the year was 1136. This is the actual record, not of one or two best layers multiplied by the number in the flock; or of the flock for a short time in best season multiplied by rest of the year. As one of the flock died in the fall, if we divide this record by $5\frac{1}{2}$ we will get the actual record per hen for the year and we find it to be 215. Do you know, or have you heard of a pullet or pullets that might, could, would or should average this in their pullet year? If so, I should like to have name and address, and their age when they began and how many they laid per day.

These hens had only ordinary care, feed and housing, but they had at least five months start of any pullet (I am setting three to four eggs per day now from them) and the best pullet that ever laid would have to get going to overcome five months handicap.

Now as to winter eggs, I believe it is entirely possible for hens to lay in winter, because these did and they were from two or three to five or more years old. The hen that lays the year 'round is the hen for the utility poultryman. Winter eggs, like winter milk, cost more to produce than in summer, at least mine costs from twice to three times as much, and



BARRED PLYMOUTH ROCK COCKEREL



BARRED PLYMOUTH ROCK HEN.
D. M. Covert, Willoughby, Ohio.

the difference in price doesn't cover it. But, as I said before, the hen needs to lay the year around. If she is a pullet we have her keeping for at least five months before we get a cent, and taking the extra work, eggs for hatching, etc., I believe a pullet costs as much the first year as any year afterwards. Besides, her eggs are smaller and not so good for hatching as the older hens.

Let's not put so much stress on the pullet as the ideal layer. They are good winter layers, but we need more than that for a good utility bird. We must have pullets before we can have hens, if we raise our stock; but for breeders, and even for good egg machines I prefer yearlings, and I believe most utility breeders do. If so, let's not advise those going into the business to sell their hens, especially so long as they pay. I am writing this now because as soon as the pullets come many neglect the hens to force the pullets, and later kill or sell the hens. Try keeping your yearling hens this coming winter, and give them just as good care this summer as you do your pullets. They will more than pay their way during the summer when pullets do not, and next winter I think they will still keep ahead of your pullets.—O. F. SAMPSON, Youngs, N. Y.

MATING BROWN LEGHORNS

I DO not claim to know all there is about mating Brown Leghorns, but I feel as if I can help out some breeders that are starting out breeding them. I am somewhat like the fellow that was making a speech on live stock before an audience composed mostly of farmers, when in the midst of his speech an old farmer arose and said, "Well you think you are pretty smart and that will look all right on paper, but I will bet you can't go into a pen of young calves and pick out the ones that will make the best milkers." The young fellow replied at once that it was a very easy job to do that: that it was the heifer calves. So I think I can pick out the best layers.

In mating Brown Leghorns I will start out with the pullet line, as most breeders are called on for about six hens to one cock, and of course should be more interested in raising good hens than good cocks. You can get a good description of the female in the Standard of Perfection, but it is mum on what kind of a cock or cockerel to mate to this pullet; also the same when it comes to what kind of a pullet to mate to the ideal cock.

In selecting the male to mate to the light colored or pullet-bred hens, select a cock that has great vigor, good size, rather long back, yellow legs, red eyes; toes well spread, tail full and well spread and carried well back at about an angle of 45 degrees; comb well serrated, free of thumb marks or wrinkles, with five points to the comb, and a little thin at the base, so that the combs of the hens will fall over to one side; breast straight and carried well forward. Be sure and see that he has no disqualification.

The color is where we are all at sea as far as a guide is concerned, and we will have to use our own judgment about it. I think the orange hackle and saddle is the ideal color for the male, and the stripe in the saddle and hackle should extend nearly to the end of the feather, and the black and orange should not intermix. Where the black extends to the end of the feathers it will have the appearance of a cape around the neck and should be cut severely in the show-room.

The hens should be large, vigorous, and free of disqualifications. They should have five serrations on the comb and it should fold over to one side and not stand up straight or fold on both sides. Breast bones should be straight; eyes, red; legs and toes, yellow; tail, long full, and well spread and carried a little lower than the male, or at about 40 degrees.

The ideal cock is described in the Standard of Perfection, so I will only say a few words in regard to the cock. Select one with vigor, shape and type true to the breed and see that he has no disqualifications. In comparing the cockerel-

bred cock with the pullet-bred cock you will see that where the pullet-bred cock has orange the cockerel-bred cock should have a bright cherry red. Also in the comb, the cockerel-bred cock should have a smaller comb and it should be thicker at the base so as to stand straight up, having five deep serrations and well rounded at the blade or rear, free of side sprigs and no serrations at the back of the comb. The other sections should be about the same as the description of the pullet-bred cock.

In selecting the hens to go with the cockerel-bred cock use the ones that are darker in color and that have good, straight breast bones, yellow legs and toes, five point combs, and it is better if they stand up straight, as you get better combs in the cockerels and the hens are not fit to show anyway. Select hens that have white ear lobes, medium size combs and wattles, and that carry their tails well spread and rather low. Select large hens, as you get better and larger cocks from large hens than from small ones. A medium size cock is best but get vigor and shape in the cock and size in the hens. In conclusion I will say do not use any birds that have any disqualifications and none that have ever been sick. Get the book on Leghorns to see how to mate them and get the Standard of Perfection to see which ones to take to the show and you need not fear competition in the show room. If you do not get these books you will be groping in the dark and if you should happen to win in the show it will be an accident and very likely you would not do so again.

Have some aim in view when you mate up your birds in the spring, and when you note results you will know how to remedy the matter next time.

In mating I will say in a general way to mate light colored cocks to light colored hens and dark colored hens to dark colored cocks, as you will never get satisfactory results to mate light and dark colored ones.—C. E. PITTMAN, Commerce, Ga.

PERTINENT SUGGESTIONS

One part of cedar oil and two parts of vaseline is an excellent treatment for sore head.

When hens become too fat the result is apt to be egg bound, soft and irregular shaped eggs, dizziness, apoplexy, liver complaint and kindred diseases.

Diseases of the liver are caused by overfeeding of fat-producing food or by the use of too much spice or stimulating substances. This particular trouble is hypertrophy of the liver, which is an enlargement of that organ, and is often found in hens kept over the second winter. It is due to feeding too much fatty food, combined with a lack of exercise. In the early stages the disease may be arrested by feeding lightly on bran mashes and green food, and to each quart of drinking water adding one-half teaspoonful of muriate of ammonia.

Some egg farmers candle all eggs each day as they are received from the nests. Their reason for so doing is to throw out all such that show blood clots—that is, every now and then a hen in straining to lay her egg is apt to rupture a minute blood vessel and this clot of blood sometimes shows itself inside the egg, and at other times we find the blood on the shell. When candling, this blood clot is easily seen if in the egg.

Some poulterers, in order to obtain the best prices for their broilers, hatch from October 1 to February 1, and have all the stock marketed by July 1.

The main reliance of the poultry breeder is the certainty that he will always have a fairly profitable market for his meat and eggs. This is the bedrock of the industry.

The late Morgan Bates once said that the class of poultrymen that are supplying the market with eggs and poultry, are the bulwark of the poultry industry of the nation.



S. C. BLACK MINORCA COCKEREL.
J. B. Sander, Paducah, Ky.



BUFF ORPINGTON COCK

"Broad Gauge," as the camera saw him from the rear and partial side view. Property of Dr. C. L. Gray, Lebanon, Tennessee.

"UTILITY" PROPERLY DEFINED

WRITING in the *New England Poultry Journal*, O. F. Sampson, a practical utility poultry farmer, says the days of the "mongrels" or barnyard fowl are limited. "Cross breeds, from pure-bred stock will be bred for years to come; but indiscriminate breeding of fowls on haphazard methods, or no methods at all, is a thing of the past. Farmers in all parts of the country and small poultry keepers have found our markets today demand poultry and eggs of a uniform size and quality, and that it costs no more to keep pure breeds than mongrels, with a much better profit.

"The industry thus divides itself into two distinct classes—utility and fancy. As to the best class for the person starting in the poultry industry to enter, it all depends upon conditions and circumstances and the desired end in view. It is well, however, to consider here just what we can rightfully term utility poultry. For some reason this word has had various meanings as related to poultry keeping. One very unfavorable one is that in which 'utility' poultry has been classed as 'culls' from fancy stock. Birds that fanciers had cut from their pens because they could not win ribbons, or from some other defect were thus wrongfully termed utility stock, without any regard whatever to their laying or general qualities. The term 'utility' in its right sense today signifies a bird often the equal of any fancy stock and worth nearly as much money, instead of being nearly valueless or on a par with the barnyard fowl.

"Somehow I feel like offering a somewhat new definition to the term utility. To distinguish this class from the fancy I know of no better way than, to say in general the 'fancy' is distinguished from the outside of the bird, while the 'utility' is distinguished by the inside. In fact, a bird may belong by proper breeding to both classes and many of our leading breeders are solving this problem today more and more. In the past, too many of our fanciers gave atten-

tion to the show points and feathers, and too little to the general qualities of the bird.

"If you will refer to one of our late dictionaries you will find the word 'utility' defined thus—'a useful thing; to make useful; to be made profitable,' etc., etc. Thus it is readily seen that no bird unless useful and profitable can rightfully be classed as a utility fowl. In a way, perhaps, the show bird could thus be classed, but the object of creating the utility class was to distinguish the specially useful bird that didn't enter the show from the show bird. Upon this basis we class the fine layer or table fowl, or the combination of both, because the hen that lays or pays the year around is the useful bird and a valuable one. The show bird is all right in show time and commands a good price, but 80 per cent of our people keeping poultry today demand layers and payers the year around. Of course, if she can win ribbons too, she is that much more valuable.

"To the person of limited means I know of no business today that will give more profit than the poultry industry for the money invested. Many persons think it is necessary to enter the fancy trade to get the profit, but in doing this one's expenses are increased many fold, and unless one has means enough to carry to the end, any plan thus started I am sure there is much more profit in the utility branch. In this, one can begin with a pen of good stock and grow in the business, learning as he advances. If success comes to him and he desires he may later go into the fancy—or increase the scale of his utility business. As a matter of fact we have few statistics to prove how successful or profitable the fancy business is in general; while the records of our utility and market poultrymen are pretty satisfactory for the past four or five years.

"No person can better handle utility for profit than the average farmer or small poultry keeper who can raise the main part of his grains. Poultry feeds are high, with little prospects of their being lowered to any great degree. The

poultryman who can raise his own feeds thus may secure two profits—from his feeds and poultry—as our poultryman can raise nearly all his corn, oats, clover, etc., at a profit.

“One point is quite essential to be considered by the poultry breeder: nearness to a shipping point. While the profits from the utility flock is often gotten from general local sales, it often pays to secure special egg or poultry sales to private or special trade in some nearby city. This is becoming more easy each year; and besides good profits are made from eggs for hatching, or stock you can spare if your strain is bred from good pure-bred utility stock.”

Give the sitting hen a nest apart where she will not be disturbed. The nest should be of fresh material and the hen dusted with insect powder to make sure of no lice. Dust again twice or three times during the sitting period. See that other hens do not disturb by laying in the nest. Keep food, water, grit, and a dust bath near the nest so the hen may be accommodated without trouble. Look after your hen every day to see that nothing goes wrong and assist her in bringing off her chicks.

EGG-BOUND HENS

It is not at all uncommon for hens, specially old and infirm ones, to become egg-bound. In the early stages of this trouble the remedy is to inject linseed oil into the passage and, by dilating it with the fingers, remove the collected matter. The ailment is generally due to overfeeding of stimulating food.

At least once each week the runs and the places most frequented by the birds should be sprinkled with air-slacked lime or a strong solution made from water and crude carbolic acid. Before this application is made, the filth and trash which has accumulated since the last time the ground was cleaned should be raked up, the ground thoroughly swept and then the disinfectants applied.

PROPER CARE AND MANAGEMENT OF CHICKS

D ID you ever think that it takes good chicks to make good laying hens, or good well grown chicks to make exhibition specimens?

Good blood, feed and management tell the whole story at the close of the season. Too many lose sight of the fact that chicks should be recognized long before they are incubated. The veteran breeders frequently get the idea that every one can and does understand how to care for and feed chicks for best possible results. However, this idea is wide of the real facts. There is a large number of poultrymen that are regarded as experts in poultry culture that are really on the surface on many points in chick management. Now don't get the idea that I am placing myself up as a know-all and you as an ignoramus. Not at all, for I am just finding out that what I don't know about poultry culture would make many volumes of good reading matter. However, it is true, many so called experts are in reality amateurs. When I visit a poultry plant representing several thousand dollars and see chicks starving to death, as a result of too heavy feeding, as well as sick and diseased from overcrowding, I am then forced to conclude that some of the "experts" are no wiser than myself. Such was the conditions on some large plants I visited last winter. The large plants hatch chicks all winter and have all the necessary equipments for winter brooding, but as a result of bad management they are stunted and starved with plenty of food at their command. It is an evident fact that more chicks are poorly managed on some of these larger plants than one would naturally suppose. Mismanagement reaches out farther than the large plant; it prevails largely with farmers and market poultrymen as well as with some local fancy growers. It is not uncommon to find a breeder breeding one hundred chicks where but twenty-five should grow. Not only that, but feeding day after day over stale food that has been left over from each feeding. Such practices mean certain death to chicks. Chicks

must be fed with intelligence, and only just what they will clean up. They must be kept clean, warm, and dry. No chick should be removed from the nest or incubator before it is thoroughly dry. Chicks are very often removed to the brooding quarters too early, and they become chilled, and die for the want of sufficient strength to enable them to get into comfortable quarters. A chick once chilled is almost as good as dead. After a chick once gets chilled or wet it is very easy to contract any disease that may come along. It is best to keep the chicks comfortable, clean and free from diseases. It can't be done unless you give them special attention. Disinfect the coops, runs, and all drinking fountains, which will be a step towards staving off many diseases. I have long since learned that disinfectants are cheaper than diseases, and I administer them frequently. The use of lime freely over the feeding grounds and roosting rooms will cause a great saving in the rate of mortality. Filth anywhere about the poultry quarters means failure. Dark and damp quarters are other great death traps. Chicks must have sunshine, fresh air, and clean quarters, or failure is certain. Not long ago in passing through the country, I noticed dead fowls had been thrown in a running stream of water nearby. This should be a heavy fine and I think is in the State of Indiana. Every fowl that dies from any cause at "Golden Plume" is burned. To bury is regarded by us as dangerous, as they are scratched up and eaten by the live fowls only to spread death and disease all over the land. Keep the chicks free from lice, and disinfect the quarters, and with careful feeding you should raise almost every fowl to mature age.—J. C. CLIPP, Saltillo, Ind.

A very successful, and at the same time well-balanced whole grain ration for egg production, is composed of equal parts, by measurement, of Indian corn, wheat, and oats, well mixed.

TEACHING INCUBATOR CHICKS TO DRINK—TREATMENT FOR LICE

CHICKS given the range of an orchard, garden, etc., will grow faster, keep healthier, and their feathers will show more life than those kept confined and given the best of care and a well balanced ration.

If you have, during the spring, purchased one or more settings of Brown Leghorn eggs, and the little chicks, after getting a good start, show white in wings, don't condemn the chicks nor the seller. This is one of the characteristics of this breed, if not handled just right. Don't discard all of them, even if they do look the picture of despair. Many of them will, after shedding their chick feathers, replace them with feathers entirely to your liking.

If your incubator chicks are slow in learning to drink water, put several bits of grain into it, they will try to pick up the grain and by so doing get a taste of water. Don't crowd your incubator with chicks. If on opening the door or raising the lid you detect a sour odor, you either have too many chicks in it or else it needs cleaning out and fresh litter replaced. In feeding chicks, try to place in their reach such foods as they take to the best. You will come nearer raising them on corn meal properly mixed and baked—being sure that it is thoroughly dried out—than on almost any other one diet. Two parts corn meal, one part wheat bran, one part wheat middlings, salt, pepper, and about three eggs, is my method of fixing this food. If you have any doubt about your chicks eating it or as to the result from its use, just try it and you will forever after make it your pet chick diet. Don't feed it wet.

It is a good plan to make an occasional trip to the brooder room to see if all is well. Many times chicks will (even if taught differently) stand around in groups and almost chill themselves rather than go to the warmth.

Keep grit where the chicks can get it. Place drinking



S. C. RHODE ISLAND RED COCKEREL
Edwin R. Cornish, Ann Arbor, Mich.



S. C. RHODE ISLAND RED HEN

water before them four times a day. Don't allow it to remain where they can get it at all times or they will get it dirty, get themselves damp and lastly, drink more than is good for them. I believe that bowel trouble is partly started by too frequent drinking of cold water by incubator chicks. Don't forget that an ooze made from the inner bark of the red oak tree is one of the best preventives as well as one of the best cures for bowel trouble in chicks, and cholera in old fowls, and it is so cheap, too. Put the bark in a pail and pour boiling water over it, allow to stand for an hour and dilute with fresh water until the drinking water is the color of weak coffee.

It is a good plan to look over every fowl for body lice. After carefully searching, even if no lice are found, give them a thorough dusting with a good lice powder. To one quart of finely sifted ashes, a dime's worth of carbolic acid is added, this is put in the oven and dried thoroughly, after which a dime box of a strong grade of snuff is added and the whole thoroughly mixed. Put the powder into a box and perforate the top. The fluff, back and body feathers are the main habitations of the body lice.

In feeding green stuff to both young and old fowls, be sure that it is fresh, tender, and of the right length and size.

Summer weather is here and the water supply, which is of much importance in winter, is more so now. Don't suppose that because the vessels are full the fowls are sufficiently supplied. Ever go to the water bucket and find it full, then go to the well and get a cool fresh drink? The poor chickens can't do this unless you are very kind and considerate of their wants. This is one of our "pet" chores around the poultry yard; but my! how fresh, cool water does repay in the end. Shade will be very needful from now on. Ever stand where the sun could get a show at you, then step off into the shade and note the difference? It seems that that would be sufficient proof to "all of us" that our poultry should have an abundance of shade.—J. A. THORNHILL, Hartsells, Ala.

CO-OPERATIVE EGG FARMING IN ENGLAND

CO-OPERATIVE egg farming is carried on in parts of England, which gives a method for disposing of eggs to a good advantage. It is a plan especially beneficial to the farmers of the district, as, no matter how few dozens they may have for sale, the same market rate can be realized as if they had a large quantity to ship.

The Framlingham and District Co-operative Society, Limited, of Suffolk, England, takes the eggs from the farmers, tests them, and then ships the entire lot to market, giving an official stamp of guarantee of quality, which finds for them a ready sale.

The Society receives eggs only of good size and quality. Each egg must not weigh less than two ounces, and a deduction of two cents in price is made for every ten coming under the weight of two ounces each.

Each farmer is supplied with a small rubber stamp, with which he must stamp each egg before it will be received for shipment. All eggs coming to the shipping house are tested by experts, who can tell pretty closely the age and condition.

The exactness of the Society has been the means of inducing the farmers to improve their stock, and mate for good sized eggs, and they are careful to bring to market only the strictly fresh article.

Each offering stands upon its own merits. There is no limit to quantity—quality alone being the consideration. A dozen or a hundred eggs will receive the same kind of attention, and be given the same advantage of sale, as will a thousand; provided, of course, they are properly stamped by the farmer from whose yard they have come, and meet the requirements of the official test.

The Society guarantees to dispose of eggs, no matter in how large quantities they may be offered, at the best price obtainable.

In Paris markets, the eggs are dated, and one pays ac-

cording to the freshness, so that it is possible to be certain of newly-laid eggs; or, if it is necessary to be economical, yesterday's eggs, or the day's before, are offered at a reduction.

Here the American farmer and poultryman can find an object lesson. Especially in communities more or less remote from a good market, it would be profitable for farmers and poultrymen to unite and form a society similar to that in Framlingham, and in this way not only put more money in the producers' pocket, but improve the grade of fowls and the quality of eggs, thereby securing the best prices for furnishing the consumer eggs of superior size, flavor and condition.

The common practice of farmers carting their eggs to the village store to be traded off for groceries, is an unwise act for both the farmer and the consumer.

In the first place, the farmer is indifferent as to the age and condition of his eggs. During a scarcity he will save up his eggs until he has a sufficient number of dozens to make it an object to "go to town." If a society would exist in the locality that would test the eggs, the farmer would soon learn that condition meant money to him, and would take greater care. By such a practice there would be less bad eggs on the market, and if this co-operative principle would become general there would soon be a scarcity of preserved or pickled eggs, or eggs from cold-storage plants, on the winter market, to compete with the fresh-egg trade, and the housewife would no longer look upon an egg with suspicion whenever she came to use one.—MICHAEL K. BOYER, Hammononton, N. J.

Ducks and geese require deep drinking vessels, especially if reared and kept on land. Unless the vessel is deep enough so the fowl can get its entire head under water, and thus wash its eyes, dust or dirt will settle in the eyes, making them sore, and often resulting in blindness. A 3-gallon water pail is the best drinking vessel for either ducks or geese.

EXPERIENCE THE POULTRYMAN'S GREAT ASSET

THE good old summer time is here, and with its coming, the ardor of many a beginner in the poultry business begins to wear off. In the early spring the days were short and cool, the hens laid good, the chicks had no mites and lice to bother them and they grew nicely, and you didn't have the desire to hunt a cool, shady place and rest off that tired, lazy feeling that you have when the thermometer registers around 100 degrees in the shade. I want to say right now, if you have a lazy bone in your body, you don't want to go in the poultry business. So many people think it is so easy—just throw out the feed, gather up the eggs, and spend the money. So many ask me, "What do you find out here to keep you busy? Don't you get awfully lonesome out here?" If they could be with me for one week from five in the morning till ten or eleven at night they would think a little differently.

I want to write this more to the young poultryman, the one who is making this his first season, and try to encourage him not to be a quitter. Nobody nor the devil loves a quitter. I know it is hard to stay when the chicks die, and the setting hens and hen-house get full of mites and when the hens quit laying; or when you have off some nice ones you think out of danger, your neighbor's dog kills most of them and something else happens to the rest. My first year the hogs and the rats eat up nearly all of mine. Experience, and trouble you must have: it is an asset in the poultry business. You may read all the books and poultry journals published, and if you have not the real experience, you can't raise chickens. So, young poultryman, when trouble comes your way put it down in your ledger as an asset. Never let the same trouble come twice, though, as then it becomes a loss. The more money you have to put in the poultry business the great will be your trouble and the more costly your experience or assets. It is much better that you have just a little; then you get your experience in small doses, and it

does not hurt so much. If I had had several thousand dollars to start in the poultry business I doubt very seriously if I would be in the business today. I can look back now and am thankful that I did not have it.

So many young poultrymen want to start at the top of the ladder instead of on the bottom round, where they should. Make haste slowly, is pretty good advice to the young poultryman. Don't you ever think the business will be overdone I was told that it would be, over twenty years ago, and poultry products are more than doubled in value now. Don't change your breed every time you let some fellow try to talk you into it. Select some popular breed that you like and a good many others like, too, if you are going into the business for a living. The older heads in the business could save a good many to the fraternity by giving advice and encouragement, especially through the months of June, July and August. Don't be a quitter.

"'Tis the coward who quits to misfortune,

'Tis the knave who changes each day;

'Tis the fool who wins half the battle,

Then throws all his chances away.

There is little in life but labor,

And tomorrow may find that a dream;

Success is the bride to Endeavor

And luck but a meteor's dream.

The time to succeed is when others,

Discouraged, show traces of tire;

The battle is fought in the home stretch,

And won—twixt the flag and the wire."

—*Trotwood.*

—A. P. RYLAND, Pine Bluff, Ark.

HOW BEST TO MANAGE THE FARM FLOCK—CARING FOR LITTLE CHICKS—DUCKS, GUINEAS AND PEA FOWLS

When a hen brings off her chicks, dust her with fresh insect powder and grease her shanks with coal oil and lard.

Study to prevent disease more than to cure it. If disease enters your flock remove the cause and the ailing birds at once.

Buy a good poultry guide and study your business thoroughly at night and on wet days. Also read a good poultry journal.

To succeed in your work you must love it; but at the same time make it harmonize with what the world demands of it.

Avoid flighty imagination. It comes from nowhere and leads to nowhere. Success is founded on the rock bottom of reality.

To keep chickens from eating with your young ducks, feed the latter on a platform in the pond, level with the surface.

To break hens from sitting, tie two of them together about one or two feet apart and place them where they can't hurt themselves.

Have good, roomy houses for your fowls; but they need not be expensive. They should be well ventilated and kept clean.

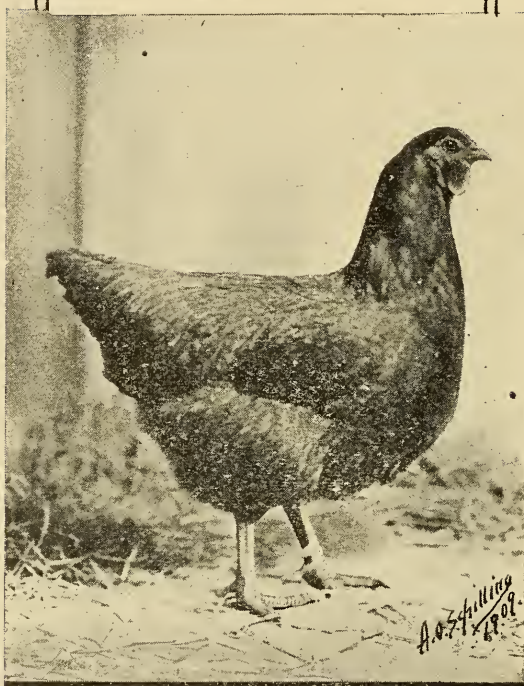
Don't neglect poultry on the farm. It should be one of your best paying crops, especially during the present period of high prices.

Don't forget that newly hatched chicks should not be fed till they are forty-eight to sixty hours old. Then give a little hard boiled eggs.

Keep the chicks on a wood floor three or four weeks if



FIRST PRIZE S-C-RED CK RL. PITTSBURG 1909
BRED AND OWNED BY
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R.C.R.I. RED PULLET FROM FIRST PRIZE PEN AT
KANSAS CITY & CLEVELAND SHOWS 1909
Bred & Owned By
RIDGE VIEW FARM

WILLOUGHBY O.

you would avoid gapes. Also disinfect your premises thoroughly with lime.

If you want your eggs to hatch you must have them laid by strong, healthy hens. A puny mother never produces a vigorous offspring.

The right sort of feed and a comfortable house have much to do with the successful hatching of eggs, and your hens must not be too fat.

City people should buy a home and ten acres out on the trolley line where they can gradually build up with poultry, truck and a few cows.

If you meet the conditions of success you are as sure to succeed as that the sun rises in the morning. Study the conditions of success.

Some keepers cure gapes in small chicks by anointing their heads with lard and sulphur the same as for lice. Better leave the sulphur out.

Become familiar with the best feeds and the best ways of feeding. Have a regular time for feeding, and never feed too much or too little.

To cure roup, colds, and swelled heads, apply on the head or in the throat, with a feather, one part peroxide of hydrogen and two parts water.

Get a good book on the diseases of poultry and study it till you can pick out any disease your fowls may have by comparing the symptoms.

Twenty or thirty fat turkeys about Thanksgiving or Christmas will help out the grocery bill wonderfully. Don't forget to have some turkeys.

Remember that conditions vary greatly, and what is good for your fowls at one time may not be good at another time, Learn to use your judgment.

Have a scratching shed and feed all grains in good straw

or leaf litter. The fowl gets its food most naturally and healthfully by working for it.

A large per cent. of fertile eggs not only shows vigor of stock, but intelligent management and favorable surroundings, both natural and supplied.

There is no need of leaving the duck out of your plans. These Indian Runners are wonderful layers and some say they even beat the best of hens.

When eggs are not fertile they are worse than no eggs if sold for hatching purposes, for they damage both the one who buys and the one who sells them.

I would put in a few guineas also. No farm is complete without their cheerful note. They board themselves and lay any number of eggs in springtime.

There is no difference between true science and common sense. The same good judgment applies in both. Science only goes farther and takes in more.

Hens will live and lay in any latitude or climate. They thrive in the far North and the extreme South. It takes no particular kind of soil to raise hens.

Have only one breed of chickens and mate only the best specimens for breeding purposes. Sell the culls or use their eggs only for table and general market.

Haven't you a well watered grass lot that is fit only for geese? They are not a bad thing to have when well managed and will pay when near a good market.

To have your eggs hatch right you must not have too many hens for the number of your roosters. More males are required as the number of eggs increase.

Keeping down expenses helps to increase profits, but sometimes profits come only through expenditures. Yet the expenditures must always be wisely directed.

Does poultry pay? If it does not what a multitude of foolish people there must be in the world! In every country on the globe there are people keeping poultry.

Go out from the city and where is there a farm without some sort of poultry? Many of the city people themselves raise poultry and find it pleasant and profitable.

To get fertile eggs the hens must have plenty of insects and worms in free range, or else be fed with beef scraps and cut bone. In fact such is necessary to get many eggs at all.

If you want eggs, don't allow the hens to be frightened or chased by dogs. Yet give them plenty of exercise and fresh air. Also the premises must be kept in sanitary condition.

You can start in poultry without any capital at all, or at least with none to speak of. Again you may start with thousands; but the chances of success are in favor of the poor man.

The farmer need not take much time for poultry from his regular work. His wife and children can do most of the lighter details under his direction—or their own if they study the business well.

When you are selling eggs in the general market for table purposes you don't care whether there is a rooster in the yard or not, but for hatching there should be one rooster for every ten eggs laid daily.

Your grandmother had peafowls, and why shouldn't you? What wouldn't you give any night to hear their strident cries in the big oaks around the barn just as you heard them at grandma's when you were a boy?

The more you confer with good poultrymen and the more reading you do of the best books and journals, the more you will know about your business; but use your best judgment on all you get: some of it may not be correct.

All classes and conditions of people can keep poultry. It is the great business for the masses; and yet, with millions engaged in it, the business is never overdone. There is always a demand for the product of the hen, and at a good price.

AN ENTHUSIASTIC BELIEVER IN REDS

Why all this noise about the Reds? Why have they gained prominence so rapidly? Why are they always bred by the man who once breeds them? Did you ever know of their being dropped for another breed? Have they been "boosted" by rich men, who carry three and four pages of advertising in nearly all the poultry journals? No, they have forged to the front on their merits, strictly as "business" birds. They originated in the hands of farmers and market poultrymen, men who were, and are still, getting their livelihood from them. Reader, do you suppose those old poultrymen of Rhode Island—who bred them for years before they were ever taken up by fanciers—didn't know a good thing when they saw it? You bet they did, and they have not abandoned them yet. Now, suppose you are becoming inoculated with the "chicken bug," what would be the things you would require in the breed you expected to handle? Would you not want eggs during the winter months, when they are worth the most money? Would you not want vigorous chicks, that grow like weeds; chicks that do not draw up and die if they happen to get wet? If you are a market poultryman and have to sell your hens by weight, after they have passed their usefulness as layers, would you not want them to have weight and bring you enough to pay for raising pullets to take their place? Would you not prefer a docile bird that is easy to handle? Wouldn't you select the breed that is not so fluffily feathered as to interfere with the fertility of the eggs? Don't you think you would prefer a color that always looks clean, even in a bare, muddy yard? Of course you would. Suppose you do not want to use an incubator and brooder, you don't have to, because there is no hen on earth that surpasses a Red hen in filling both these requirements. And how about their beauty? Can you find any combination of colors more pleasing to the eye than red and black? Judging from the admiration bestowed upon them in the show room, one would think not. Just go to one of our prominent



S. C. RHODE ISLAND RED COCK



S. C. RHODE ISLAND RED HEN.

poultry exhibitions and stroll down "Red Alley." What do you find but enthusiasm of the highest order? Just listen to the questions asked about them and the earnest replies given by the breeders and you will realize that the old adage—"Where there is so much smoke, there must be fire"—is more than true.

Rose Comb Rhode Island Reds are making more progress today as a show bird than any other breed in the Standard, considering their existence in the hands of fanciers. I will admit that a year or two ago they were of many different shades, but the color has been so rapidly improved that the percentage of culls is no greater than in any other breed, only a little easier recognized by the amateur. So when you decide that you must have a breed combining utility and fancy points, without the one interfering with the other, just cast your lot with Rose Comb Rhode Island Reds and you will never regret it.—M. C. RICHARDSON, Front Royal, Va.

BREEDING INDIAN RUNNER DUCKS

Personal experience has convinced me that it makes no difference how good the stock may be that the eggs are from, if they are not properly hatched and the ducklings do not have the proper feed and care, they will not mature into prize winners or even good laying stock. To get best results in hatching, use hens. After the hatch is over and the ducklings are dry, remove from nest to a dry place, protected from rain and wind. First feed should be given after ducklings are thirty-six hours old. Equal parts of corn meal and wheat bran, baked dry and moistened, make an excellent feed for first six or seven days. Add to this five per cent clean, sharp sand and feed five times daily. After first week, equal parts corn meal and wheat bran, added to this one part in ten of beef scraps, moistened and fed three times daily. Whatever you do don't leave out the beef scraps nor the sand. Ducklings grow so fast that they must have some meat food to strengthen the bones. The cause of leg weakness is no

meat food. Chicks can be raised without much meat food, but ducks cannot. To mature early and make high-record layers, they must have plenty of meat food and water to take exercise in. Chickens get their needed exercise by scratching. Ducks must have water to take exercise as they can't scratch. For first ten weeks we keep our ducklings yarded where they can get plenty of green stuff. Clover, rye, mustard, and rape, are all good. Ducklings require more green food than chicks. We have shallow cement basins for water, deep enough for the ducklings to get their heads under. This prevents clogged nostrils and sore eyes. Sore eyes are fatal to ducklings. After ten weeks we give them the run of the creek, as they are grown by that time. When young they should have shade in their yards. May and June have proven the best months to hatch Indian Runners. Cold spring rains are fatal to them, when very young. After ten weeks of age they are the most hardy fowl known. The best egg producers we have ever raised were hatched September 9th. Laid their first egg, February 1st, at less than five months of age. We never feed whole grain to young or old stock. We feed the same feed to our laying stock that we feed our young ducks after first week. With the above feed and care, we raise ninety-eight per cent of all ducklings hatched.—CLAYTON I. BALLARD, Morristown, Tenn.

WHEN SHOULD CHICKENS PERCH?

Authorities do not all agree whether a chicken should be allowed to perch early in life, or be compelled to squat on the ground. One writer says nature is a very reliable guide. When the wing feathers have sufficiently developed to allow the bird to use them, then perching is at once indicated. That, no doubt, is true, but, on the other hand, if birds perch while very young, the breast bone, which is a little more than gristle, is easily bent. But after it has taken on its more firm, bone-like condition, it requires considerable pressure to bend it. In the young bird the crookedness is not caused by a break,

but rather by pressure or the shape moulded. This is generally brought about by small, round roosts, the breast bone being brought down on the keen edge, and the pressure caused by the head counter-balancing the tail, thus gradually forcing the bone out of its keel shape, and the indentation becomes permanent as the bone hardens. This is especially so with chickens from inbred stock. The writer has a different method for this perching, using low, wide perches, so the chickens must squat, and thus the breast bone is protected by the legs, which will not permit it to come in contact with the perch. The practice of allowing fowls to squat on the floor is not advisable, for the reason that the floor is generally cold, and there is always more or less current of air moving close to the ground, which is apt to chill the stock.

No turkeys should be allowed to perch before they are fully three months old, four months would be better. Even when it is a case of weight for weight, a nice straight-breasted bird with the flesh laid evenly alongside it, has the appearance, if not the actual fact, of carrying more meat, and no one can deny the fact that it is much easier to carve.

EGGS WITHOUT SHELLS

Care should be taken not to overfeed fowls, particularly with stimulating condiments which excite the ovary and inflame the lining of the oviduct. This kind of feeding stimulates the egg-producing organs to excessive production with the result that these organs become debilitated and hens lay eggs without shells. This is shown by the fact that hens supplied with an abundance of shell-forming matter lay shell-less eggs. One common cause of these eggs without shells is internal fat which blocks the walls of the oviduct and impairs the functions. Worms in hens' intestines sometimes lead to eggs being expelled before they are properly shelled. Narrow perches, owing to the struggle of the fowls to keep their balance, sometimes cause fowls to drop eggs prematurely.

SOME FACTS LEARNED BY LONG EXPERIENCE

TO write upon this subject in all its connections, would take a greater than Solomon of old to do it justice. The writer has bred poultry for thirty years and longer, and the more he reads and writes the less he knows about it; however, I frequently read pieces written by so-called fanciers that (judging from personal experience) are nonsense.

When I was a boy I heard a tale told on a justice of the peace, a good, honest fellow, he was, and to do what he thought was right he would, or die trying. Well, the justice had a bad case, and only two witnesses and two lawyers, one on each side. The good old justice called court to order and proceeded to hear the evidence after the lawyers got through wrangling about how it should be done. One witness swore positively to certain things the accused was guilty of, and the other witness swore just as positively to the opposite that the accused was not guilty. Then the lawyers—oh my! The fire began to fly and the old justice twisted in his chair until all was over except his decision. He (the justice) remained quiet for quite a while until the lawyers began to press him for a decision. Time was up; something must be doing and the justice looked around at his audience, lawyers, witness and last at the accused victim, and said, "Well, gentlemen, I do not know what you all are going to do in this matter, but I am going to throw up my job."

Now, when one reads what is written in the journals and papers of today on and against poultry, he feels like the old justice, throwing up his job. Faking: what is faking in the poultry business any more than anywhere else? A man that will tell a lie will tell one in the poultry business just as quickly as he will in any other business. But stop; some poultry breeders act dishonestly when they do not intend to do so, and the same with the buyer. We are all guilty; as the good book says, we are condemned already, and the thing to do is to look into what we are doing and see if we can

find anything wrong in our own business that we would condemn if it was practised by another. Selling eggs, for instance; the buyer is at the mercy of the seller. Now suppose the one you are selecting eggs for was looking at you when you were picking out the eggs to ship, would it change your selection of the eggs, or would you pick them out just as though the buyer was not present? This brings my actions and yours right home to us. Do by your customer as though he were sitting by your side and seeing just what you intended shipping him. But there is another side. Where is the buyer's relation to such actions? He forgets these eggs have to go by express, tossed and tumbled and thrown around in wagons and offices many times before they reach their destination; however, the seller has packed them so you can scarcely break one though you throw a trunk (a drummer's trunk at that) on the package. But at last they reach the buyer, they are unpacked, found in good condition, the buyer is well pleased, looking forward to a fine hatch, and sometimes actually counts the chicks before the eggs hatch, gets his coop ready for the hen and brood of chicks, and behold on the twenty-first day finds possible one weakling. Mad? Yes of course he is (the buyer); lost three weeks and a chance at the early show. What follows? The seller catches what Paddie gave the drum. Now, no joking, you buyer and seller both read this and cast a stone at the one who is guilty. Faking. Is this faking? No, not a bit of it. Then again. See a cut of some breed of fowl printed in a conspicuous place in some journal—a cut of a bird that never breathed a breath, painted by some artist; but right under the cut you read these words: first prize winner at such or such a place. Where is the man that bred that bird? Not living. God who created the world and all that there is in it, created or made man and gave him the power of intellect, and he learned to be an artist, and he painted this picture, and had a cut made from it to represent the breed of fowls owned by different fanciers, and not to be used as a genuine photo of a living bird that had

won for his owner the honors of first prize. Is this faking? Echo answers.

Where, oh where, are the poultry breeders drifting? Sooner or later it looks to me that we will be one large family scattered all over this big world—North, South, East and West—one family engaged in one line of work either for pleasure or profit or pastime; then why not do as you would be done by? Do not write a “scorching” letter, full of anger and fire, unless you have a positive reason to do so. We all make mistakes, we all do wrong and fall far short of what we should do, and while I am frank to admit there are some I have no doubt sell and buy eggs and stock with a bad intention at heart before the trade is made; yet with all of this, to say the least, certainly there must be some honest ones left.

SYSTEMS, SECRETS, ETC.

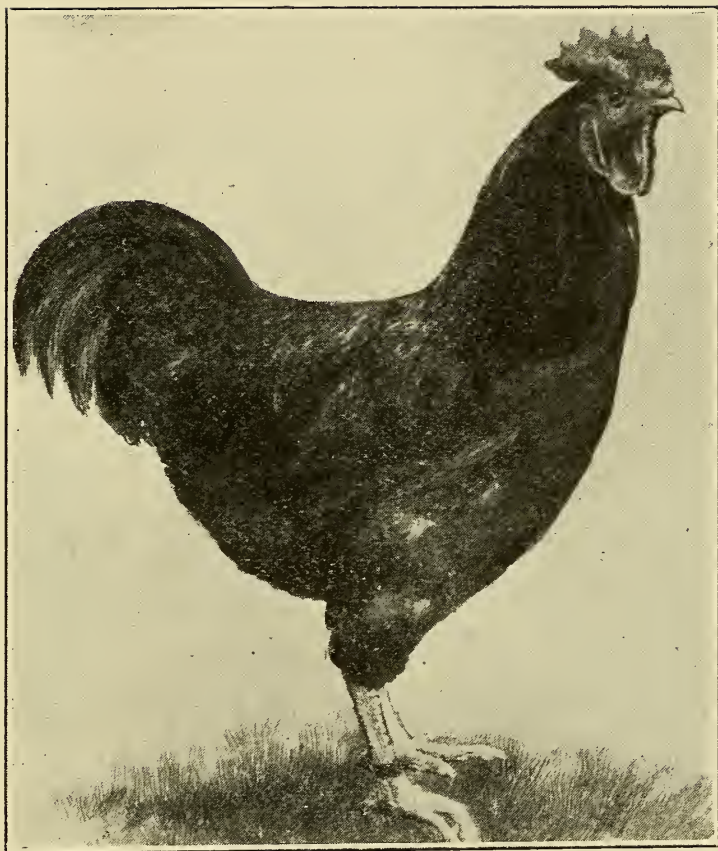
I have no patented systems or secrets. I am a bred and born Southerner, live in 20 miles of where I was born, and all I know about poultry (which is very little) I freely give it to the poultry public.

Now is the time to begin to fight lice and mites; do not let them get a start; if you do, better burn out and begin over. I am whitewashing every house and all inside fixtures thoroughly. Dust your old hens and growing chicks.

HEAD LICE ON LITTLE CHICKS.

This is one of the poultryman's greatest troubles. I will give a remedy that has proven very successful with me. When your hen hatches, take her and grease under her breast and wings with lard, and give her a good dusting with some good lice powders and put her in the coop with her chicks. In ten days—not longer—grease the chicks' heads and back of necks and throats with this mixture: one teaspoonful of mercurial ointment to four tablespoonfuls of lard or vaseline, and repeat the same treatment you gave the old hen at first, and you will have a healthy bunch of chicks.

For a tonic for old and young fowls, take a half tea-



S. C. RHODE ISLAND RED COCK
S. C. Alexander, Asheville, N. C.



S. C. RHODE ISLAND RED HEN

spoonful of common copperas to one quart of water; put in earthen vessels and allow the fowls no other water to drink. Do this for three days in succession and then give them fresh water for three days. Continue this treatment for a month. It will not hurt them and you will see great improvement.—
C. H. DOZIER, Marion, Ala.

THE SOUTHLAND AND ITS POULTRY

There has been an erroneous idea prevalent among Southern breeders that for real good foundation stock, they must go North for it. There was never so grave a mistake made.

There are hundreds and thousands of as good or better birds raised in the Southland as can ever be raised in the North, and no Southern breeder should patronize any other than a Southern breeder when he wants the best. We do not mean to say that there are not wonderfully good birds in the North, for there are lots of them, but there are some in the South equally as good.

Every breeder in the South should strive his uttermost to improve his flocks until the dear old Southland will be recognized the world over as the foremost poultry field of the whole world. Is this too much? Let us put all emphasis on *No*. It is not too much; it is no more than reasonable. We have a more congenial climate, better pastures, earlier season, the best and purest waters; soil adapted to raising every variety of chicken feed.

There is no sane reason why the Southland should not lead. The present census will reveal marvelous advances in poultry culture in the South, and will be only a small insight into the future of the business.

Root for the South; work for the South; strive for more and better poultry in the South. The day is not far distant when the South will lead all the ranks of Poultrydom.—FOUNT H. RION, Woodmere Farm, Brentwood, Tenn.

HOW TO GET LAYERS

Do not blame your pullets next winter when they are not laying; you should have been busy on the problem during the past winter, is the admonition of a writer in *Farm Life*. Continuing, he says that you should know which hens have furnished the eggs from which these pullets have been or will be hatched; the chances on the average farm are that the eggs from the poorer layers and slower maturing pullets are being used for this purpose, and that the hens that have been laying all winter are being used to hatch these eggs.

Culling, selection, elimination, kept constantly in mind, and continually practiced, will mean healthier fowls, livable chicks, earlier pullets and eggs when they are most wanted. Cull out the extra males and the weaklings; select the quick maturing, early laying pullets and the hens that laid well during their first laying year, and make up a breeding pen for producing eggs for hatching. With them, if possible, have a male or males whose dam was a vigorous, prolific hen.

Do not set eggs from the whole flock, but dispose of all males not used in this breeding pen, and from the remainder of the flock gradually eliminate the drones. It is surprising how large a proportion of the average flock is useless, or worse than useless; for these non-producers are in the way of the workers and are preventing them from doing their best.

If you cannot make up such a breeding pen this spring, try this for next season. Next fall mark or band the first thrifty pullets to begin laying; also the yearling hens that are doing well this season. During the early winter carefully note their performance, and from these banded hens and pullets make up your next year's breeding pen.

You will be surprised at the increased vigor and productiveness of your flock. If your hens are not responding to good treatment with a good average egg yield, try increasing that average by cutting out the non-producers.

IMPORTANCE OF PROMPT ATTENTION TO DETAILS

A GREEABLE to our editor's request, I herewith submit some random thoughts that I hope will be of some benefit to all, and especially to those just starting the business.

All Southern breeders should be through hatching by now. In my experience, and from observation, I know chickens hatched after April 15th do not thrive here in the South; whether due to climatic conditions I do not know. Some say it makes no difference, but results show. One of our largest local breeders last year hatched some six hundred May chicks, and he later told me that if he raised ten out of the six hundred he did not know it. He is trying this again this year and I hope he will succeed, but do not think he will. Of course, if you have had "bad luck" (?) and can't allay the fever by any other means, why, go ahead and hatch, and hatch and hatch. Then blame the man that sold you eggs from run down, inferior stock, etc. My advice to such is to put your money in houses and fixtures; then, later, purchase some thoroughbred stock: a pen, even a trio or pair, and next year you will be ready for business and besides will have worked off some of the enthusiasm. Secure eggs as early as possible next spring, and by having made all preparations beforehand you are bound to succeed, if there is any chance for success. Some people can never successfully raise chickens.

'The greatest essential to the business is the act of "*Doing it now.*" Don't build your houses with cracks and crevices; and if one shows after completion, due to shrinkage or warping, have it closed, and *do it now.* Don't wait until your fowls have contracted colds and roup. Don't put off changing litter or cleaning out droppings. Have a regular time for this and *do it.* Don't put off scalding and cleaning fountains and hoppers. In short, don't put off doing anything you can do at the time. We are prone to procrastinate. The average beginner who has to have some sad experiences before learning **this lesson**, buys a setting or a hundred eggs, sets them any

old place, or, if incubated, starts his machine, and about the time it is due to hatch, begins to think of a brooder. Orders one and of course it is lost in transit or delayed at the factory, and the hatch comes off orphans; places them in a basket or box; chicks are too crowded, or get chilled, and then some five or six days afterwards his brooder comes to hand. Then diarrhoea, * * * * * all gone. "Bad eggs", "cuss" words, general disgust; "nothing in the business." As I said before get ready first, and *do it now*. A young man connected with one of the leading farm journals of the South wrote me for day-old chicks. I do not sell day-old chicks and so advised him. He then wrote for chicks old enough to show their sex. Did not want to sell these, but as an accommodation and at his insistence, I shipped him seven (one extra for his little sister), and before the week had passed received from him a letter beginning: "Woe is mine and the little sister is in tears." He wrote of ordering a brooder that *came too late*, insecure box, bad rat, and all seven murdered in cold blood in one night. Bad luck? No, bad management and procrastination. When he sees this I do not want him to think I do not regret his loss, and to show I do regret it, I am going to ship him at least a trio, for I have been along the same road and know its every turn.

Just now, as a result of our show, our section is badly afflicted with the genuine poultry fever of the most malignant type, and early next fall there will be various and sundry fixtures for sale cheap. Don't think me a knocker or croaker, but the same *lack of preparation* is going to cure many cases of the fever. Already the cry of worthless eggs and bad luck (?) stories galore are heard in the land. By the way, speaking of eggs I should like for any of the readers who have purchased northern or eastern eggs prior to March 15th, and who have had good hatches from them, to communicate with me. Will return postage if they will give me the names of the party from whom purchased as I want to place their name on my roll of honor. I acted the sucker

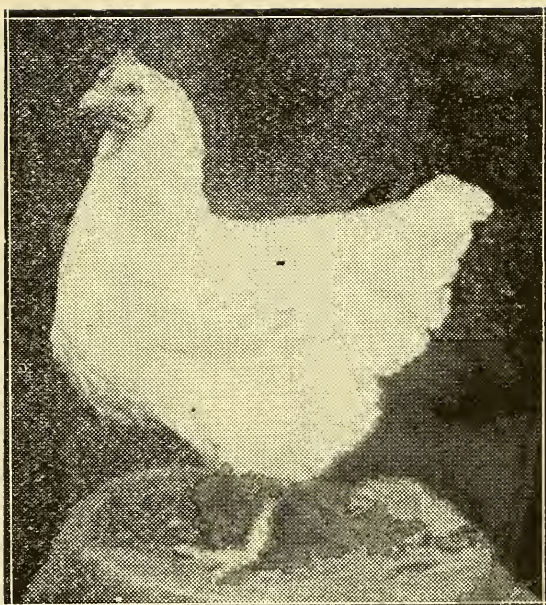
and went against the game again this year. Paid a good price for sixty and got eighteen measly chicks that will probably develop into pure-bred scrubs. There is nothing to it. We southern breeders have got to get the very best obtainable stock and mate them in December for our early southern trade! Never again for me. If I have any money to spend it goes into stock: one good one if I cannot afford more. But no more early eggs from the East or North. The South is forging ahead, and the time is coming when we will ship our northern and eastern brothers their early eggs. If my plans carry, I will be in this game next year; but I will have something further to say of this in your advertising columns.

Mr. Honest Poultryman, how does this experience strike you: Sold a party a setting of eggs, and on the 20th day happened to meet the man of the house and he told me, "I had bad luck with them eggs. An old sow got in the second or third night and ate up eight of them." Later on in the day the lady of the house called me up by phone and said, "Them eggs we got from you are all rotten but two. Only two chickens hatched." I let her explain for a while and then asked her how many the hog ate. She was naturally dumfounded, not knowing her husband had told me of the hog incident; but she soon regained her composure and said, "They were rotten too." I told her I did not feel I was to blame, but that I would replace them with another setting, as I expected to keep my reputation for satisfied customers. Later, I got hot and sent her check for the amount she had paid me for them. Still, this is my only kick this season and the fact that I have sold several parties several times, more than compensates me for the one unjust kick.

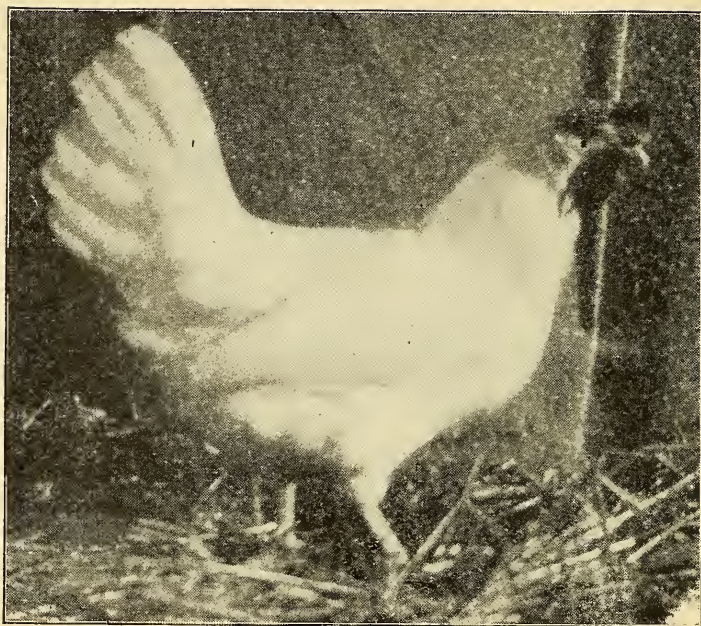
To get back to my knitting. The sore head season is almost here. No one has ever satisfactorily explained the cause of this disease, and everyone has a different theory; but the fact remains that it visits us every year; some years

in a mild form and then next in a severe form. I had only a slight trace of it last year. I find keeping the chicks up until the dew is off the grass helps; but you are sure to have it, and I want to give you my infallible remedy. I believe we should pass these good things along. This remedy was tested thoroughly last year and has been used by me and by friends for several years, and I have never yet found a case it would not cure. Watch carefully and at the first signs of the disease, coop the entire flock. Remove the scab with a tooth pick and rub thoroughly with a mixture composed of ten grains of yellow oxide of mercury to two ounces of pure vaseline thoroughly mixed. Any druggist can supply this. Above are correct proportions but any quantity can be prepared as it keeps well and does not deteriorate. One or two applications will effect a cure if started at once, but in severe cases it may require more. I annoint those affected and those that are not, and find it does not spread to the rest of the flock; so far this reason I am inclined to think it will prevent the disease. Am going to give it a trial this summer as soon as I hear of the disease being in my neighborhood. It does not soil or injure the plumage. Now, as before said several times; get this now and be prepared.—GEO M. WELLS, Pine Bluff, Ark.

According to *Poultry Topics*, there can be no "best bird in the show." "There can be a best Barred or White Rock, or a best Golden Wyandotte, or a best Brown Leghorn; but no judge can pick out a 95-point bird of one variety and say it is better than a 95-point bird of another variety. Besides it is not fair to the different breeders. Offer prizes for the best bird of any one variety; but do not make one variety compete with another. We have too much of the idea that one variety is far ahead of any other now. There is no best variety."



WHITE PLYMOUTH ROCK HEN



S. C. WHITE LEGHORN HEN
J. A. Dinwiddie, New Market, Tenn.

THE PSYCHIC ELEMENT IN POULTRY RAISING

By this subject I mean in plainer words the mental attitude of the man toward his work. "As a man thinketh in his *heart*, so *is* he," and not less is it true that as a man thinketh in his *mind*, so *does* he. In every field of endeavor that which we call "success" is but the psychic or mental impress which the man puts upon his efforts.

If one would ask me what I would regard as of greatest importance to one after having intelligently selected the work of poultry raising, I would reply: Have your own philosophy; never forsake it; go ahead and talk but little. "Have your own philosophy!" What room is there in the life of a poultryman for the thoughts of a philosopher? Better make room for them, for if one thinks that there is no need of philosophy in the poultry yard, it would be well to keep out of the business, for the philosophic or the psychic element is really the great potent force which starts and keeps going all those who amount to anything in poultrydom. It will be admitted that this may not be a conscious element in the task; but the unconsciousness is by no means a proof of its absence.

The psychic or mental condition of a poultry raiser will undoubtedly be reflected in the chickens themselves. Do not too willingly dismiss this statement as ridiculous. A chicken, no less than a man, is a part of the great totality of the universe, and, since this is true, may we not conclude that between a chicken and a man there is more or less of a sympathetic relation mentally? Ask one of our great poultry breeders, "When you go among your stock, what do you think?" and he will reply, "I think health thoughts of them and I believe I have done one-half the work of keeping them well, if I am not afraid of their getting sick." To think otherwise—to entertain thoughts of fear—would predispose the stock to that which would decimate its ranks.

It was during a yellow-fever epidemic in New Orleans some years ago that one of the citizens put this placard on

himself as he walked the streets: "Wear a smile on your face and a flower in your button-hole." This psychic power—this cheer-up spirit in the man—may have saved as many lives as the doctors.

A few years ago, the writer was engaged in conversation with a gentleman who was somewhat enthusiastic upon the subject under discussion in this article. Said he: "Don't you think you can hypnotize a hen?" Of course I do, and I believe, moreover, that there is not only a close relation between the mind of a poultry-raiser and his poultry; but, also, that from a business standpoint, he may be helped to success—helped to success against, and in spite of, the unfair methods of business competition. If he possesses within himself that highest form of psychic life which we call self-reliance, he will make himself like a wall of adamant against which sparks of fire may strike, and thereby extinguishing themselves, will fall to the ground.—B. F. HUNTER, Paris, Tenn.

RAISING PULLETS

One authority recently expressed the opinion that the ability to grow strong, vigorous pullets during the summer is the most important factor in winter egg production. Some may not agree with this and it is surprising the large amount of literature that has been written about winter housing and feeding, all of which is very essential, while but little has been written about the summer and early fall management of pullets. Good houses are costly and from that standpoint should be given much attention, but the great advantage of this system of summer care is that it costs nothing—a little extra care and trouble to feed.

If a convenient house for summer is not already available, one may be constructed very cheaply. A summer house to accommodate thirty pullets should be 8 by 10 feet, with a six-foot elevation in front and four feet in the rear. If care is taken to keep this house clean, one may house as many as forty pullets in it. If the desire is to keep more

than forty pullets in a house, it should be estimated for at least two square feet of floor space for each pullet. Cheap lumber and building paper will make a serviceable roof. The frame may be made of 2 by 4-inch scantling. Cover the sides with wire netting and cover this with cheap cloth or burlap and you have a good summer house that is complete at very little expense. The south side should be left so that the cloth or burlap can be rolled up except when storms come from that direction. This house should be placed on two good oak runners, with cleaves attached, so that it can be drawn to any part of the lot. A movable floor should be placed in the house and covered with straw or chaff. This litter should be removed frequently in order to keep the house clean and sanitary. When the pullets are four months old, roosts may be placed inside and they will soon learn to use them.

If birds are to be shown in the fall or winter fairs, the poulterer will find that the pullets raised in the open, where they ranged at will, will be stronger and have brighter and more lustrous feathers than the chicks raised in confinement. One of these free range pullets, when confined to a coop, will need a little more training but will endure a long journey and the strain of the show room much better than those raised in close confinement on soil that has been poisoned by the accumulated droppings of years.

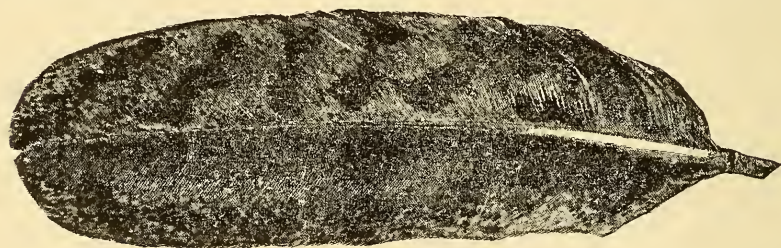
POULTRY MANURE FOR THE GARDEN

Poultry manure is very suitable for the garden. Clean out the houses frequently and scrape up all droppings about the coops and runs and spread them on the surface after the garden is plowed or spaded. Rake or harrow in the manure lightly and it will diffuse itself more evenly through the soil than if plowed under. It is more available than barnyard manure and may be applied successfully to any garden crop ordinarily grown.

THE BEAUFIFUL BUTTERCUPS

BY L. B. AUDIGIER

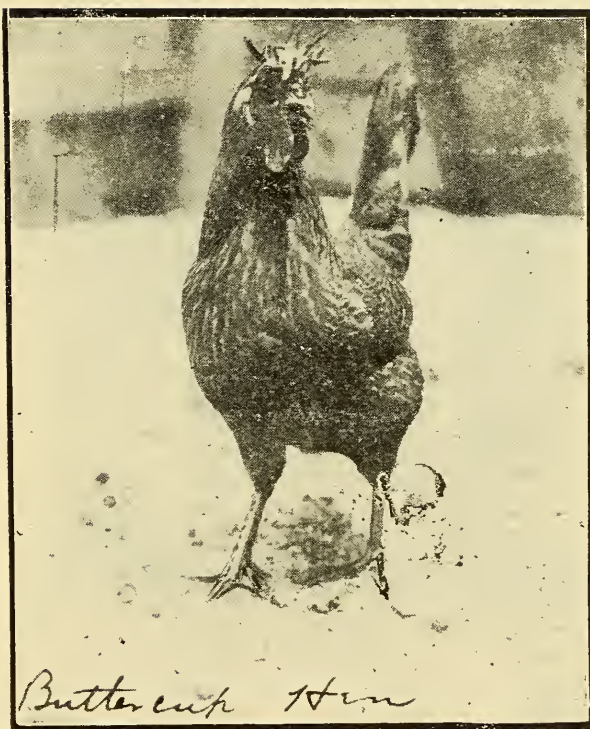
The Sicilian Buttercups were first brought to this country from the Island of Sicily by Capt. Cephus Dawes in the Barque Fruiterer—a fruit vessel laden with oranges, raisins and figs. When ready for his long journey the captain bought a coop of fowls to supply him with meat during the voyage, but the hens proved to be such a never-ending source of income that the kind hearted and frugal sailor, rather than kill the “golden goose” decided to carry the birds to the end of his journey. These were sold on the New England coast to Mr. Loring, who afterwards disposed of them to James S. Dumaresq, Cato’s Hall, Easton, Md., who afterwards imported five pullets and one cockerel from the earthquake dis-



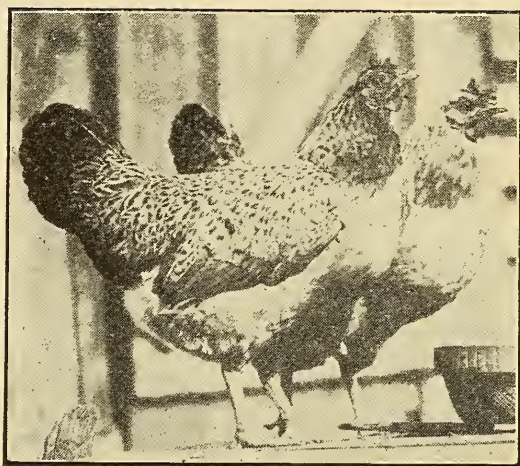
A Buttercup Wing Feather, from a bunch sent the writer from the original imported stock by Mr. Dumaresq.

trict of Sicily, near the now stricken city of Palermo. These fowls, now in possession of Mrs. Dumaresq, have on their original leg bands and are very fine specimens. Mr. Dumaresq’s previous knowledge of these birds gave him a good opportunity for getting what he wanted. Being Consul General to Italy for eleven years, he was familiar with every spot of this country and was one of the first to become enthusiastic over the breed. As far as we have been able to learn they were called Buttercups in Italy, from the peculiar shape of the comb, being neither single, rose nor pea, but as the name indicates, round, like a buttercup, full of little sprigs.

While the plumage of the cock is a butterish red, with



BUTTERCUP HEN.
C. S. Tait, Brunswick, Ga.



BUTTERCUP HENS
Mrs. J. S. Dumaresq, Easton, Md.

black hackle, tail and wing flight feathers; the hens are somewhat spangled or laced, after the manner of Golden Spangled Hamburgs. They lay as well at two and three years of age as they do when pullets, and are good layers until six years old. They are non-setters and lay practically all the time, even when moulting, large, pure white eggs. They mature very early, from three to four months, are very small boned, and have a great deal of yellow meat. They are exceptionally gentle and friendly, active and good foragers, and what is more important they are light feeders. It requires no more feed for twenty-five Buttercups than it does for a dozen Leghorns and if given free range they require no feeding except during winter months. They are extremely vigorous and hardy, feather and mature quickly, and are unsurpassed as broilers. Unlike Leghorns and the other egg-producing breeds, they are as plump as a partridge, and the meat is of the highest quality for the table. Although of such excellent quality as broilers, on account of their size, are not recommended as roasters—but for eggs, every day and all the time, they are without the shadow of a doubt, the best and most valuable breed on earth.

For the above information concerning the Buttercups I am under obligations to Mrs. Dumaresq, and to literature left by Mr. Dumaresq, who died at his home, Cato's Hall, Easton, Md., January 18, 1909, of heart disease, aged 60 years. Mr. Dumaresq came to Maryland from New York about twenty years ago and for several years resided in Easton. During the first administration of President Cleveland he was one of the legation secretaries in Paris. He was Consul-general to Italy during President Grant's and Garfield's administrations, and also one of the vestrymen of the First Episcopal Church in Rome. The deceased was a great lover of nature. The idealistic appealed strongly to his impulses so that whatever he had, be it a collie or a fowl, nothing but the best of its kind could be permitted at Cato's Hall. Many fanciers were glad to get instructions from him on "points," and his versatility on all subjects made him a delightful companion.

CHARCOAL, GRIT AND OYSTER SHELL

There are three important items about our poultry yards we see often written about—see them mentioned in the editorials of all poultry journals, and still, if you will visit some of our yards today you will see fowls denied them. Those three items are charcoal, grit and oyster shell. All three are as important as the feed you are so very particular about.

Charcoal—This seems to worry the beginners, also some of the older heads in poultry culture. Some claim fowls will do as well without charcoal as with it; others ask what is its duty or good to our fowls? Meals that fowls are given, mash, meat and other soft foods, when fed charcoal along with it, will prevent the process of digestion from producing noxious gases. Charcoal enlivens a lazy layer and aids every organ which is most likely to be overcome through its contact with impurities. Charcoal cleanses the crop, prevents sour crop, cleanses the intestines, brings sweetness and purity to decayed and fermented food. It aids the fowl's digestion by allaying all gas, keeps the whole digestive organs sweet and pure. Fowls that have free access to charcoal leave their roosting rooms feeling fresh from a good night's rest, when, if deprived of it, they come out appearing rough from poor digestion and sour crop, which destroys their appetite, rest and usefulness. Charcoal allays bowel trouble, purifies and keeps the blood free from humor, aids the digestion of sour food and will be found as useful as any one thing which goes into a fowl's digestive organs.

Grit—Fowls have gizzards; horses have teeth. The horse masticates his whole grain with his teeth, the food is passed on into the digestive organs ready for assimilation; but with fowls we note a difference. The whole grain is first deposited in the crop, thence to the gizzard, still in its whole form, not ready for assimilation, and for a fowl to properly prepare it, it must have clean, sharp, hard grit, which, when taken into the fowl's gizzard, acts as a mill and masticates, grinds or whatever you care to apply to the process. In the gizzard the

fowls' food is prepared for assimilation. When fowls are not judiciously furnished with suitable grit the feeder fails just so much in getting out of his feed all that is due him. Fowls on free range, if on sandy or gravelly land, will get enough grit, but if yarded or on land which has no gravel, grit must be provided. Broken crockery, rocks, finely broken, anything hard, sharp and broken into proper size will do.

Oyster shell—Helps to grind the fowl's food; enters into the bone, muscle and feathers of a chicken, forms the shell around the eggs a hen lays. If kept before the hens at all times will prevent soft-shelled eggs; keeps them from acquiring the egg-eating habit, and we find shell is as important as the meat. We find in most foods today very little ash, and in no grain do we find enough to supply the hens' requisites. No foods fed poultry today contain enough ash for shell-making material, so to offset this, we must look carefully to the shell box being full. When refilling the charcoal, grit and shell boxes it would be well to throw out all dust and what is left before replacing a fresh supply. Don't let your fowls want for these, they are very important. J. A. THORNHILL, New Decatur, Ala.

FEEDING YOUNG CHICKS

Don't be in haste to feed the young chicks. Twenty-four hours after the last egg hatches is the earliest moment for feed. Forty-eight or even seventy-two hours may be none too late. This little organism must have time to assimilate the egg-yolk which nature provides for its first nourishment. This is like the colostrum or cows first milk, for the calf. If it is not properly utilized indigestion and disease may result. For the first few days feed every three hours and with great regularity. This is to prevent over eating. Bread crumbs dipped in milk and squeezed till they crumble makes a good feed. Don't use dough or wet mash. Stale bread crumbled fine is good. Some of the dry commercial foods are also good.

As the chicks develop, their feed should come at longer

intervals and they may have cracked corn, wheat, and other grains. Some give millet seeds but these are doubtful since millet injures horses by affecting the kidneys. Chicks that range with the mother get plenty of animal food, but if kept in a brooder they should have table or commercial scraps. Give fine grit and crushed oyster shells. Keep pure water in reach. Feed in a chaff litter. Gauge quality by demand but be careful and never over feed.—T.C.K.

STRAIN

If a breeder modifies a variety of fowls in any particular direction we call it a strain. The strain may be in the direction of more eggs, or size, or a certain color. It may be anything the breeder chooses. It is desirable only in so far as it represents value.

CHOLERA

Spend your time in preventing cholera rather than in trying to cure it. It is a germ disease and is taken with food or water. If you keep the germ away your fowls will not have cholera. It may be introduced by buying from infected flocks. It is scarcely worth while to attempt a cure of cholera cases. Kill and bury the birds and disinfect the premises by sprinkling them with a five per cent solution of carbolic acid, or say an ounce to the gallon of water. Be sure that your food and water are not contaminated.—T.C.K.

NERVOUS INFLUENCE

The cow's nerves have to do with giving down her milk. The hen is affected in the same way with regard to laying eggs. If you move her into new quarters she will cease laying. Anything that disturbs a hen militates against her egg-laying capacity. Hence everything about the poultry house should be quiet. Nothing should occur to agitate or disturb the laying hens. Sometimes the power to lay seems under control of the hen's will. If you shut her out from the nest she will postpone, at least for a short time, the laying of her accustomed egg.—T.C.K.

WHY SCRUBS ?

The wonder is why farmers waste their time on scrub chickens when pure breeds pay so much better. It must be because they think pure breeds require too much fine food and careful attention. There is where you are mistaken. The pure breed can pick up a living as well as any if you select the right kind, though mixed breeds of any kind will pay much better than plain scrub stock. The mixed breeds run out after the second generation while with a little careful selection the pure breed will keep on improving and pay better at the same time. Get a pure breed at once.—T.C.K.

DOES THE HEN PAY ?

Yes and no too. She pays some people and sinks money for others. Last year she added \$650,000,000 to the wealth of this country. Somebody must have got money out of that pile. The Missouri farmers in 1907 made \$45,000,000 out of poultry. It is claimed to have brought more money than all their other farm crops, which is hard to believe.

The hen pays the fancier and also the careful farmer who runs her as a side issue with regular farming. But she does not pay the man who is out of a job and looking for a gold mine in incubator chicks. The most money is in the production of eggs alone. After that there is many a slip, for incubator chicks have a way of dying off very rapidly unless you know exactly how to take care of them, and even then the task is not an easy one.

The hen business is a widely distributed one. Millions of people have hens but no one of them makes a million dollars out of them. The profits are not easily concentrated. You can't mass capital in hens and get a trust on them as Rockefeller did in coal oil. The hen can't be handled in that way and you needn't to try it. She belongs to the great body of common people and always will.—T.C.K.

The healthy and laying fowl has a good appetite and is a hearty eater. A fowl's condition can well be judged by its appetite.

POULTRY PAYS

The farmers of Warren county, Tennessee, find the poultry business both profitable and promising. During the month of March they sold sixteen carloads of eggs and four carloads of live poultry. This footed about \$20,000 in cash for the month of March. During April the average was about two carloads a week.—T.C.K.

PURE BRED POULTRY

There is now more pure-bred poultry in this country than ever before and the per cent of it is constantly increasing. It is increasing because it pays. The fancier has known this all the while and the farmer is learning it rapidly. It is a well-known fact of science that constant breeding in a certain line brings greater perfection. The proposition is nothing but reasonable and ought to have universal acceptance. No one who thinks can believe otherwise.—T.C.K.

DON'T MIX BREEDS

To the fancier this injunction is wholly unnecessary. He wouldn't even dream of doing such a thing. It is to the general farmer and the novice that we address these important words. Under no circumstances do you want to mix breeds of poultry. A special breed of chickens or other fowl is built up through years of careful selection. It has developed certain characteristics, or valuable qualities, which are regularly transmitted by heredity. It may have been bred for eggs, or meat, or form, or special color. Now mix your breeds and what have you? You have a clash and confusion of tendencies which neutralize and destroy each other on account of their alien character. The carefully built up work of generations is in ruins and soon your chickens have "run out" and are good for nothing. What else could you expect? What can you hope for in breeding Barred Rock upon a White Leghorn? What kind of a calf would you get from a Durham bull and a Jersey cow? What kind of a pup would a Bulldog father make with a Greyhound mother?—T.C.K.



R. C. RHODE ISLAND RED COCKEREL



R. C. BLACK MINORCA HEN
Lloyd C. Mishler, North Manchester, Ind.

CARE IN SUMMER

Don't neglect your poultry because the weather is warm. Higher temperature multiplies vermin and increases bad air in a poorly kept poultry house. Chickens on the range may get some food but not enough. In summer poultry houses should be cleaned out oftener than in winter. Foul gases from the droppings and insect pests on the perches must be prevented. A daily clean up will estop the former, and coal-oil applied to the perches with a brush will put an end to the latter. This should be done at least once a week. The walls should also be gone over now and then with oil and one or two liberal coats of whitewash to keep insects from getting a start. The open front should let in plenty of air and sunshine. No better germicide exists than the direct rays of the sun.—T.C.K.

CHICKEN CLIMATE AND SUITABLE SOIL

Milo M. Hastings, recently of the Agricultural Department of Washington, D. C., has written a new poultry book—"The Dollar Hen." We have been complimented with advance proof sheets of a portion of this work and publish the following therefrom. This work refers especially to poultry conditions in the South and will no doubt become quite popular :

Climate is a big figure in the cost of poultry production. Every day that water is frozen in winter means increased labor and decreased egg yield. Mild winters mean cheap houses, cheap labor, cheap feed (a large proportion of green food), an earlier chick season, which, together with the mild weather and green feed, mean a large proportion of the egg yield at the season when eggs are high in price.

The American poultry editor wastes a great deal of ink explaining why the Australian egg records of 175 eggs per hen, cannot be so, because in this country, the hens at the Maine station only average 125. The Maine Experiment Station lies buried in a snow drift for about five months of the year. The Australian station has a winter climate equal

to that of New Orleans. The Australian records do not go below thirty eggs per day per hundred hens at any time during the year. Our New York and New England records run down anywhere from zero to ten eggs per hundred hens.

The following table will show the effect of the climate upon the distribution of the egg yield throughout the year. The records at New York are from a large number of hens of several different flocks and probably represent a normal distribution of the egg yield for that section. The Kansas and Arkansas lists are taken from the record of small flocks and are not very reliable. The fourth column gives the Australian records with the months transferred on account of being in the southern hemisphere. The last column gives the railroad shipments from a division of the N. C. & St. L. railroad in Western Tennessee:

	Central New York per hen per day.	Kansas Ex. Station per hen per day.	Arkansas Ex. Station per hen per day.	Australian laying contest per hen per day.	Shipments from New Hampshire egg farm	Shipments from West- ern Tennessee.
January .....	.21	.25	.32	.51	26	1509
February .....	.26	.22	.30	.66	41	1520
March .....	.43	.60	.62	.67	66	2407
April .....	.56	.52	.38	.61	83	1775
May .....	.59	.57	.44	.53	81	1650
June .....	.50	.46	.42	.45	61	1131
July .....	.44	.43	.34	.43	58	878
August .....	.37	.32	.38	.41	54	422
September .....	.26	.28	.29	.29	24	100
October .....	.17	.13	.22	.31	3	541
November .....	.08	.06	.18	.31	2	703
December .....	.14	.25	.15	.40	11	1150

An equable climate the year round is the best for the chicken business. The California coast is fairly equable in temperature, but its winter rains and summer drouths are

against it. The Atlantic coast south of New York is fairly good, probably the best the country affords. The most southern portions will be rather too hot in summer, which will result in a small August and September egg yield. Probably the region around Norfolk is, all considered, the best poultry climate the country affords.

SUITABLE SOIL

Soil is important in poultry farming; in fact it is very important, and many failures can be traced to soil mistakes. Rocky and uncultivable lands must not be chosen. To locate on any soil which will not utilize the droppings for the production of green food, is to introduce a loss sufficient to turn success into failure.

The ideal soil for poultry is a soil too sandy to produce ordinary farm crops successfully, and hence an inexpensive soil; but because land too sandy to be used for heavy farming is best for poultry, this does not mean that any cheap soil will do. A heavy wet clay soil worth \$150 an acre for dairying is worth nothing for poultry. Pure sand is likewise worthless and nothing can be more pitiable than to see poultry confined in yards of wind swept sand, without a spear of anything green within half a mile.

The soils that are valuable for early truck are equally valuable for poultry. Sand with a little loam, or very fine sand, if a few green crops are turned over to provide humus, are ideal poultry soils. The Norfolk fine sand and Norfolk sandy loam of the U. S. soil survey, are types of such soil.

These soils absorb the droppings readily and are never covered with standing water. The winter snows do not stay on them. Crops will keep greener on them in winter than on clay soils three hundred miles farther south.

The disadvantage of such soils is that they lose their fertility by leaching. The same principles that will cause the droppings to disappear from the top of the ground will likewise cause them to be washed down beyond the depths of plant roots. This loss must be guarded against by not going to the extreme in selecting a light soil and may be largely

overcome by schemes of running the poultry right among growing crops or by quick rotation.

Land sloping to the southward is commonly advised for the purpose of getting the same advantages as are to be had in a sandy soil. In practice the slope of the land cannot be given great prominence, although other things being equal, one should certainly not disregard this point. In heavy lands it is necessary to raise the floors and grade up around the houses. The quickly drained soil does away with this expense.

Timber on the land is a disadvantage. Poultry farming in the woods has not been made a success. It is the same proposition of the droppings going to waste. I know a man who bought a timbered track because it was cheap and who scraped up the droppings to sell by the barrel to his neighbor, who used them to fertilize his cabbage patch and in turn sold the poultryman cabbages to feed his hens, at 5 cents a head. Of course, this man failed, as does practically every man who attempts to scrape dropping boards and carry poultry manure around in baskets, instead of using it where it falls.

There is little to be said in favor of uncleared land for the poultry business, but there is something that can be said in favor of the poultry business for uncleared land. A man who buys a timbered land for trucking can get no income whatever the first year but the poultryman can begin his operations in the woods, clearing the land while he is raising a crop of chickens on it. The coops may be placed in the cleared streak and most of the droppings utilized. In fact, the plan of a streak of timber alongside the houses is not bad for a permanent arrangement—the birds certainly enjoy the shade. But the shade of growing crops is the most profitable kind for poultry—THE DOLLAR HEN.

The advice each year goes the rounds of the agricultural press: "Pound up all old broken crockery, dishes, etc., for the chickens, for grit." We say, don't. In the first place commercial grit will be better and cheaper than the labor employed in breaking up the dishes, and, in the next place, glazed crockery is apt to be poisonous to fowls.

POULTRY PICKINGS

Economy is the keynote of profitable poultry raising. Without judicious feeding, fowls will soon eat their heads off.

The farmer hasn't so much time to prepare show chickens as the fancier but he should always have something for local exhibits.

Geese live 30 or 40 years and are good breeders to 10 years of age or longer. Have a well watered grass lot for them.

Sunflower seeds are fine for poultry but hard on the land. As a feed they take the place of beef scraps just as cracked peas do.

Plymouth Rocks are the greatest farm favorites, the Barred variety being in the lead. The other main varieties are the Buff and White.

With regard to molting hens, it seems better to encourage nature in her course. The starvation method to induce early molting does not pay.

The size of the poultry keepers flock grows best with his experience. He must have time to get onto his job if he expects to stay on it.

If eggs are your object, choose your layers from the best egg laying strain. Fancy points of form and color are not in it in this connection.

To prevent white diarrhoea among your chicks put a teaspoonful of five per cent carbolic acid in ten quarts of water and from this take their drinking supply.

If you are working for eggs be careful to select the most vigorous birds for winter layers. Market all the rest as broilers. Weaklings are no account as egg producers.

It is a fatal mistake to begin poultry keeping on a large scale. The old saying that small beginnings make great endings applies here the same as in other things.

WISE WORDS BY UNCLE BEN

Put flesh on your cockerels before they go to the market. The increased price will pay for the feed and something extra besides.

If you want eggs, buy birds from an egg-laying strain, even at considerably more cost. It will pay you to do so during the first year.

Even after they are able to go abroad, young turkeys should be kept indoors on rainy days and in the morning until the dew is off.

Maggots may not cause limberneck but it is at least caused by the ptomaine poison in the putrid meat where the maggot is found.

Always make your advertisements tell the truth. It does not pay to deceive in any way. Tell a pointed story and give the facts.

Ducks have no true crop. Hence their food passes directly to the gizzard and must be soft. Grain is hard and large quantities are not good for them.

Please your customers always. Give them exactly what they want. If their desire is for white eggs, let them have them. If they prefer brown-shells furnish those.

You can't be a successful poultryman and a reformer at the same time. Success comes by meeting demands. Reforming people's taste is a horse of another color.

Yet, breeds can not do everything. Your flock must have care and attention. Neglect your hens for even a few days and you will see the result in a decrease of eggs.

Some say they can replenish their stock cheaper by buying baby chicks than in any other way. Possibly so, for this baby-chick-selling is a new industry with much promise.

Never feed musty grain, moldy bread, or decayed vegetables. Your water supply must be absolutely fresh and clean. Dirty vessels and unwholesome food are a constant menace to health.



J. W. Henderson, Knoxville, Tenn.



MOTTLED ANCONA HEN
H. C. Shepard, Berea, OHIO

WHAT GRANDMA SAYS

Don't fail to raise a flock of turkeys. They will rid the farm of all kinds of insects and do but little damage to crops.

Don't try to keep poultry in cramped quarters. Get out where land is cheap and varied in character and the range extensive.

Some of you may still be keeping a round river rock in the embers to drive hawks away, but let me tell you there is nothing in it. You ought to be ashamed of such superstition.

The domestic turkey is but a short remove from the wild species and must have plenty of free range. To succeed it must nest and raise its young in nature's way.

I think peacocks are very ornamental about a farm, especially when there are tall trees around the home in which these birds can perch and screech during the night.

Don't buy a cheap incubator. A good one gives trouble enough. Until you get a pretty good start, I would advise that you let "Old Speck" do most of your hatching.

I don't pretend to advise as to the many new-fangled breeds in these times. Old speck and the blue hen did mighty well in my day but I suppose they are now considered back numbers.

Chickens are found to thrive the world over wherever man finds a home and in no place do they thrive better than in our own sunny Southland. East Tennessee seems like their natural home.

Look out for prowling dogs. If they devour eggs and break up your nests shoot them on the spot. This spring a neighbor of mine put a hole through a thieving dog with a shotgun and I said "amen."

Yes, there was another way we had to break a broody hen from setting. We tied a string of red cloth to her wings. She was so puzzled to understand and get rid of the red strip that she forgot all about setting.

CHICKLETS

Don't feed much corn in hot weather. It makes too much heat and fat. Yet wet feed is not now in favor. The chicks natural feed is dry.

Don't put too many chicks in the brooder for in spite of ventilation some are apt to smother. The rest will probably be stunted and never do well.

It is a good sign to see chicks eating from their owner's hands without fear and climbing upon his arms and shoulders. It shows that they are well managed.

Enclose a lot of from four to six square rods as a feeding place for the chicks instead of the old style "A"-shaped coop. It may be made of poultry wire or pickets.

Give the little chicks a roosting pole as soon as they are able to use it. Put it near the ground so they may easily get up and down. Give them a little help until they learn to get up by themselves.

THREE TO ONE IN FAVOR OF POULTRY

It is conceded to be a fact, that the most money is realized from a crop when it is fed to stock and converted into money in the shape of cattle, hogs, sheep, etc., while the manure is returned to the land. It is claimed that the quickest returns and best profits are realized from hogs. This may be true of hogs as compared to other stock. Far more profitable than these and much quicker are the returns from poultry. To make a pound of pork takes five bushels of corn; this pound is worth say, six cents. We figure that a bushel of corn will feed a hen, on a farm, one year, and that in that time she will lay ten dozen eggs. Or to make a pound of eggs takes three and three quarters of a pound of corn, the pound being worth twelve cents. So that when we feed a hen our corn we get twice the money value in eggs for less than four-fifths of feed, a return of nearly three to one as against feeding it to hogs. Yet even intelligent farmers say there is no money in raising poultry.—T.C.K.

POULTRY PICKINGS

A good hen is always busy, alert, and active. She goes singing about her work and lays eggs "to beat the band."

Every farmer may pay his grocery bill with eggs if he will. It is easy to keep 50 hens and with proper care they ought to net from \$50 to \$90.

Give the boy \$10 to buy a flock of laying hens. With it have him open a bank account and he may learn business habits that will make him a rich man.

Build your poultry house in the early fall when the weather is dry and the brooding rush is over. It will then dry out and season properly before being occupied.

In cleaning up your eggs leave the natural bloom on them as much as possible. Place them in cartons of one dozen each and sell them while fresh.

Why not constantly select the best birds for breeding purposes and build up a strain of your own? It will pay you and may give you something of which you will be proud.

Ducks are hardy and easily raised. Being water fowls, wet grass and drabbling does not hurt them. They can be easily raised with very little or no swimming water.

Keep the roosting houses clean. Whitewash the walls and spray the perches with kerosene emulsion. Provide the scratching sheds with fresh straw frequently and keep plenty of fresh water and grit in reach.

BUYING DAY-OLD CHICKS

The latest development in poultry trade is selling day-old chicks. They are generally sent by express and go to all parts of the country. The fact that chicks just hatched will not need food for from one to three days is the main point in favor of this business. They do not have to be fed en route. The buyer is also more certain of his money's worth than when buying eggs. He is likewise rid of the expense and worry of hatching.—T.C.K.

FARM NOTES

Health holds the first place in poultry production. If you can't keep your fowls well it is not worth while to keep them at all.

All diseases should be prevented rather than cured. Medicine is a very slender support for the poultryman to depend upon. It rarely cures.

Eggs may be depended upon to become fertile in from four to six days after mating. The effect of mating will continue for several months.

Gapes is caused by a small worm in the wind-pipe. Keep your chicks on dry ground where they can get no red worms and they will not have gapes.

On the farm roosters may run with the hens at all times but it is not necessary for eggs. Of course they must always be present for breeding purposes.

Where there is wet grass the mother hen should be kept in a coop till her chicks are three or four weeks old. Nothing kills young chicks so fast as drabbling in wet grass.

GET THE YOUNG FOLKS INTERESTED

Get the young folks interested in poultry. It will be an inspiration to them and especially to the girls on the farm. It pays to develop ideals early in life and to make them practical. Making a success with ten or twenty hens will tell powerfully on the future business career of any young man. This small business involves all the essential features of the largest business in after life. It demands study and care in planning and management. Industry in executing details is necessary. System and order are developed. The importance of meeting conditions successfully is brought out in feeding, housing, caring for their health, and maturing the fowls. Practical contact with humanity in selling and buying is learned. Economy in cost of production and saving for further investment will help on to thrift and business success. This is practical education of the highest order.—T.C.K

HOW TO FEED FOR EGGS

YOU will note by reading the topic I am about to write on, that it is a very interesting subject. A great deal has been said in regard to this subject, but I feel that there is yet lots of room for more. We have, no doubt, read articles on the same subject, yet can study each one and we will find that the person who has written them either does not care to give us the knowledge he or she possesses, or they don't know the real facts from experience. What we want to read is tested facts so we can put them into execution and attain better results.

Now then, let us first consider the most important fact that we must mate for. We must have eggs so that we may have something to sell, and one of our greatest troubles is to produce them. A large number of articles appear in the numerous poultry journals on "How to feed for eggs." Let me state that no matter what you feed or how you feed, it will not produce eggs if you do not have the strain of fowls that are bred to lay. Of course you can increase your egg yield by correct feeding, but to make a hen or pullet lay close to the 200 mark, takes more than good feeding. "Bred to lay" is a common expression of the fancier who has just installed trap-nests to see just how his birds will lay, to use when advertising. We must not only use the term for a drawing card, when advertising, but have the chickens that are really "bred to lay" to back it.

It is impossible to build up a strain of bred to lay birds in one or two seasons, as it takes years of hard work to do it. In a great many breeds the type of bird that the Standard requires is far from the bird that we could expect to receive a large supply of eggs from. We can gain a great point, if, when starting, we purchase from an old breeder who has bred his birds to lay, thus gaining the advantage of his years of labor.

Let us now consider the best way to mate to increase our egg yield. Our first thought is the trap-nest. To be candid, it is the best way to find out which pullets are doing the right kind of work, so that we can use them in our breeding pens as hens. But, although the trap-nest is the only sure way of telling which birds are doing the laying, it is really not needed by the experienced poultryman to pick out a good layer. The thorough poultryman and fancier knows which birds are doing the laying and can tell at a glance whether a hen is attending to business or not. Give an old poultryman some birds in the fall of the year

to mate up and in 99 cases out of 100 he will pick out the birds that are good layers. He knows that a hen must be a good layer to be of any value to the breeding pen. You will say, "How does he do it?" The question is a hard one to answer, but I know it to be a fact. I would state that the birds he would select would be those that were in perfect health and condition, active, but not wild. In other words, birds that know how to work for what they eat, and do it. These birds are the egg machines and it will be found to be true in nearly every case. Of course, there are exceptions and we will make mistakes, therefore the trap-nest is very satisfactory. All mistakes can be avoided by its use.

Another fact that I have noticed is that the hen with the large egg record, is not always the producer of heavy laying pullets. Also, that any hen with a good record from a flock of a "bred to lay" strain is liable to produce a great layer. I would suggest that you do not use a hen for breeding unless she has a 125 marked after her leg band number. Of course, the better her record the more valuable she will be in the pen. You can, by mating such birds as I have been speaking about, expect to produce a flock of pullets that will do a little better than the parent stock, if correctly fed.

Now another point, and one of the most essential in all requirements of poultry, and without it we cannot look for success in any part of the business or fancy, and that is vigor. We must have the vigorous birds or everything is for naught. If we want eggs we must have vigorous stock, and if we want to continue breeding for eggs, it must be prominent in our flock. Also for exhibition, it is the vigorous birds that carry off the blue, other things being equal.

Vigor is needed in all parts of the poultry world and if it is lacking in our flocks we can look for lots of infertile eggs during the breeding season. So vigor is no slight matter to be just glanced at and passed by. We had better use birds of not quite so good quality that are vigorous and have lots of snap, if success is to be ours.

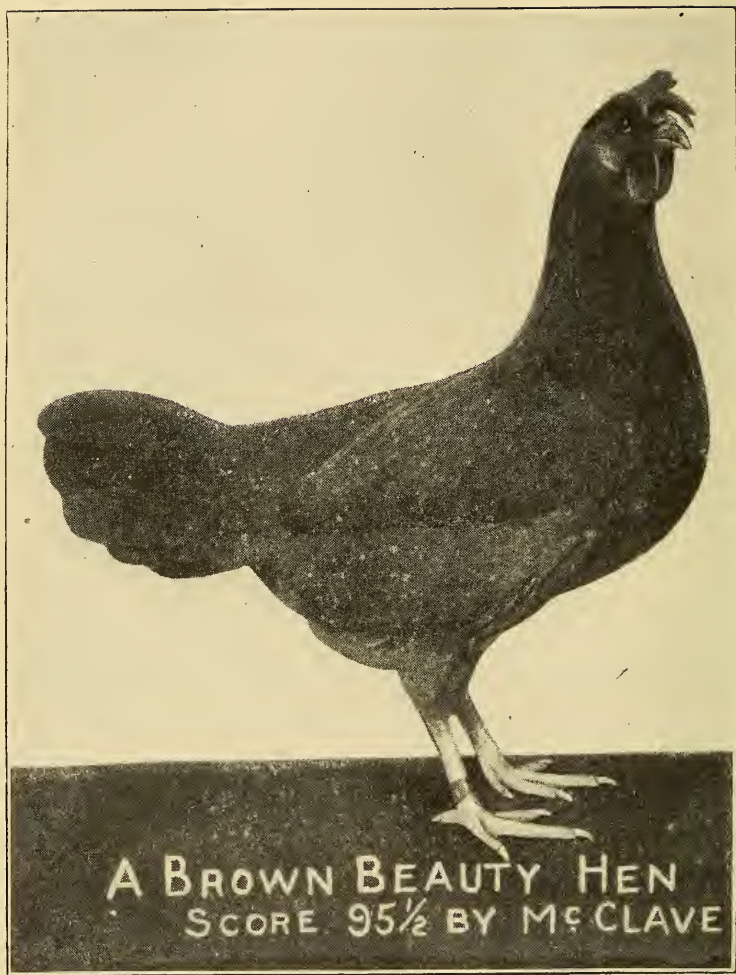
To keep vigor in our flock, we must mate vigorous birds, those that are very active and always on the move. Our male birds should be the kind that would fight at a wink. These males are the kind that do their part as to insuring fertile eggs.

Mating for exhibition is an exhaustive subject and a hard one to deal with, as there are so many different breeds, but to take them in general, we will note that they all



S. C. BROWN LEGHORN COCK

E. E. Carter, Knoxville, Tenn.



BROWN LEGHORN HEN

J. H. Henderson, Knoxville, Tenn.

have hard points to produce and try, as we will, sometimes it seems as though we will never acquire them.

First of all, let us take the shape, as that is the most important. Some varieties have long backs, and others have them short, some are very deep in body, while others are not. In most cases the best birds in plumage are off in shape. Now comes the question, should we mate these birds? I say yes, if we can find a male of extra good shape and plumage to mate them to. If we mate poor birds together we would expect the same kind of offspring, but if we mate birds with good points together we would look for some of the young stock to be better than the parent stock. We should reserve the best in all points for use in our pens, provided they have a fitting egg record. Now we must strive to have the hard points bred in one sex or the other because if we do not breed it somewhere we will never produce it. Don't forget that our breeders must have good combs. If Rose Comb, avoid hollows, coarseness and unevenness. If your birds are of a single comb variety, try to use females with standard combs and a male with one point less, if they show a tendency to throw more than standard points. If they breed true, breed the correct number of points on both sexes. Be careful as to the shape of the single comb, and see that there are no side sprigs or other defects.

Never use a small bird in your pens. If you do it will be the undoing of your work for years if you are not very careful. Always use good eye and leg color in both male and female, if possible. Be sure that you have it in one sex, if not in both; also see that your birds stand well on feet.

When mating for eggs, vigor and exhibition, catch your hens with the good records and place them in a pen. Get an exhibition coop and a judge's stick, also your standard. Open your standard to your variety, read it through as it will brighten up your memory. Now turn to your cut. Place a bird in the coop and examine for shape, after looking first to see if she has any disqualifications. If she is not in good shape, put her out, but if she is good, put her through a rigid examination as to standard requirements. If she is of good quality, put her in another pen. Go through with the lot in the same way and then select the best of the bunch for your breeders. Mate them to males that you have examined the same way. See that all are quite active and vigorous, also of good size, and success will follow your efforts.

HOW EGGS SPOIL

The earth, the air, and water are teeming with innumerable bacteria of various kinds, some good and some bad. Everything that decays does so under the action of bacteria that bring on decomposition. When an egg spoils it is because bacteria enter it and decompose its substance.

You might suppose that bacteria could not penetrate an egg shell, but they can for the shell is porous and imperfect. Were there no bacteria, infertile eggs would remain fresh and unchanged for an indefinite period.

But the fact is that bacteria enter most eggs in the process of production or soon thereafter. They originate in a diseased ovary of the hen. So eggs may soon spoil from these germs alone. Therefore most eggs must be disposed of at the earliest moment after production.

In hot weather especially it is necessary to market your eggs at once for heat favors a rapid development of bacteria. As much as possible your eggs should be kept in a cool, dry place. Here the advantage of cold storage is apparent. Eggs stored in the spring months, keep much better than those laid in the hot months of late summer because the bacteria do not get such a good chance at them.

Again, it is a fact that eggs may be infested from the nest soon after they are laid. Unless frequently changed the nest material teems with invisible bacteria. Here again moisture comes to favor bacterial action. A damp nest dissolves the normal sticky coat of the egg and leaves the pores open for bacteria to enter. If possible this coat should never be washed from eggs.

Most of the facts that we recount, have recently been proved out by eminent investigators and especially at the Starrs, Connecticut, experiment station. The lesson we learn for egg production is first that we must have hens, and secondly that eggs must be protected in every way from bacteria, and thirdly that there should be no delay in reaching the best market.—T.C.K.

An opossum eats the head and neck of a fowl, and kills only one or two at a time. A mink bleeds his victims in the neck and sucks the blood, and will slaughter a dozen or more birds in a night. Both leave the carcasses in the coop or house.

Always begin the poultry business on a small scale and increase the investment as demand and profit increase. Doing must go hand in hand with knowing how.

SMALL VS. LARGE FLOCKS

FOR years the beginner has been advised to start in the business in a small way. In fact, he has been cautioned to do so that he might increase in knowledge as his plant enlarged. It is not necessary to go over all that again, but more important to take up the methods employed by so many beginners—and not a few others who have been in the business for several years.

It is false economy to have these large families, as have been proved time and again. The most successful poultrymen and poultryers of today are of the same opinion.

The arguments used by advocates of large families—fifty or more in a flock—are:

- 1st. It saves expense in building.
- 2d. It saves labor in feeding and watering.
- 3d. It saves time.

Grant that there will be less building required, and that time and labor will be saved, the argument in favor of small flocks—not more than twenty—five head in a pen—means:

- 1st. There will be no crowding and fighting on the roost at night.
- 2nd. There will be more exercise taken when the fowls are compelled to remain indoors.
- 3d. There will be less vices like feather-pulling, egg-eating, bleeding the male bird's comb, etc.
- 4th. There will be more eggs.
- 5th. There will be better fertility.
- 6th. There will be better health.

Are not such reasons worth more than the expense of extra lumber, extra labor, extra time?

If there is anything wrong with the hens—such like an ailments, or droopiness, or an accident—it will be more readily noticed in a small flock than in a large one.

In small flocks there is a better chance to see that all the fowls get a proper share of feed. There are fewer "bullies" who drive away the more timid hens.

Overcrowded flocks are not the active, energetic hens that are so needed to make profitable egg production. Besides, there cannot be the proper fertility. On farms where there are these large, common flocks, two or more males are allowed with the hens at the same time. Even if these males do not quarrel they are always interfering with the

other's attention to the females. This not only cripples fertility but is injurious to the hens.

But the greatest viewpoint is that from health. It is a noteworthy fact that the bulk of inquiries that come to the editor, asking for roup, cholera, and other ailment remedies, come from farms upon which it is the custom to have large flocks. At night these birds crowd on the roosts, get close together, and the animal heat makes them "sweat." This condition causes an injury when the next morning the hens fly from their roosts and go out to face a temperature many degrees colder than what they had during the night.

For successful work, we repeat, never allow more than twenty-five fowls in one flock, and the nearer you keep the number fifteen, the better will be the returns.

After repeated trials with the different breeds, the writer has become convinced that where a person wishes to cater almost exclusively to a meat market, as well as a winter egg trade, he will make no mistake in keeping three varieties: Light Brahmas for large-sized roasting fowls; Plymouth Rocks for medium-sized roasting fowls and spring chickens; and White Wyandottes for small-sized roasting fowls and broilers. Should a Summer egg trade also be desired, then the Leghorns could be used, principally on account of their non-broody traits. They will be laying when the American and Asiatic classes are thinking of raising families. In cases where the market does not call for large-size roasting fowls, it is advisable to cut out the Brahmas and keep only the other two mentioned. If the market is not a good one for broilers, then either the Plymouth Rocks or the Wyandottes would fill the bill, and in that case it would be best to keep only one breed. In mentioning these particular breeds it is not done to convey the idea that they are the only ones fitted for that class, but rather to show what class of fowl is needed. The Rhode Island Reds, or the Orpingtons, for instance, might suit the fancy better.

Beware of egg-sucking dogs. If you find one in the act don't wait for judge or jury. A dose of shotgun is the best remedy.

It requires about four geese to make a pound of feathers. Picking live geese for their feathers is a practice that has been practically discontinued in this country.

CROSS-BRED POULTRY AS LAYERS

The paragraph below, by a writer in the *Rural New Yorker*, may be taken for what it is worth.

It is a little out of date to talk about mating, but if the reader will cut this out and paste it where it will not get lost, or bear it in mind when the time comes to adopt the advice, he will thank me. In the Spring of 1908 I set aside Plymouth Rocks and one Brown Leghorn, and mated with them a Rhode Island Red cockerel. A little later I substituted a White Leghorn cockerel. These were all pure-breds. From these matings I got 14 pullets, four of which were black, four brown, and six white. November 1 all of the brown pullets began to lay, and dropped 22 eggs that month, skipping but eight days. In December the others began to lay. In January they laid 276 eggs, February 263, March 274. There the record ends, but one week in May, to show how well the record was kept up, 13 pullets laid on Sunday 13 eggs, Monday 12, Tuesday 14 (I have evidently missed one egg Monday, or one of the pullets had laid two eggs), Wednesday 12, a total of 75-12 dozen in one week. Even now from ten pullets I get not less than seven, more often nine, and about twice a week ten eggs in a day. This year I have about fifty pullets crossed, Rhode Island Red cockerel and White Leghorn hens. Some are pure white, but most of them more or less creamy in color. Of course I breed pure breed stock also, but what I want to emphasize is the fact that crossing light weight, like Leghorns, on heavier stock, and vice versa, is the surest way to produce layers. The pullets that gave this excellent record will go into the pot by the time they put on good flesh after the moult. This flesh and fat will go on quickly under close confinement, and the quicker it is laid on the tenderer it will be.

POINTS IN POULTRY HOUSE CONSTRUCTION

There are three important points in building a poultry house, says the *Farmers Home Journal*, that should never be overlooked. The open or partially open side should face south, it should be on high ground so as to have naturally dry floors and the sun's rays should be admitted throughout the greater part of the day. The proper situation and construction of a poultry house is a very great advantage to the poultryman and if these matters are included, the house may be constructed successfully along most any other lines.

POULTRY NOT AN EXPENSIVE FOOD

It has been a general belief, says the *Poultry Herald*, that the flesh of turkeys, ducks, geese and chickens is a luxury and an expensive food that none but the rich could afford every day and that the poor could consistently purchase for their Sunday dinners only. The fact of the matter is that poultry meat is not expensive as compared to beef, pork, mutton and fish if all are purchased at fair market values.

A bulletin of the Agricultural Experiment Station of Connecticut gives some interesting figures in this connection. The cost per pound of protein, which is the part of the meat which builds flesh and muscle, is given as follows: Fowl at 15 cents per pound, 90 cents; roasting chicken at 20 cents per pound, \$1.16; turkey at 23 cents per pound, \$1.25; duck at 25 cents per pound, \$1.68; goose at 20 cents per pound, \$1.39; loin of beef at 25 cents a pound, \$1.56; leg of mutton at 20 cents a pound, \$1.37; loin of pork at 12 cents a pound, 92 cents; codfish at 10 cents a pound, 93 cents.

The price per pound of fowls, chickens, turkeys, ducks, geese, beef, mutton, pork and cod may not agree with the market of today, but they serve the purpose of comparison and show that fowl at 15 cents is cheaper than beef at 25 cents by a very wide margin when viewed as a means of producing lean meat on the human frame; that roasting chicken is much cheaper at 20 cents than leg of mutton at the same price. The figures show that the central figure of the Thanksgiving feast is not as expensive at 23 cents a pound as is beef at 25 cents or mutton at 20 cents, and that the proverbial "good, fat goose" is as cheap at 20 cents a pound as either beef at 25 cents or mutton at 20 cents. It therefore appears that in addition to being a delicacy that tickles the palate, poultry is sufficiently inexpensive so that it need not be considered as a luxury.

By keeping your chicks on short grass you not only prevent drabbling but give them a good nip of juicy, tender, green food.

Get ready for the moulting season. Sell off all hens over two years unless they are especially fine for breeding purposes.

Do you have scaly legs? It is caused by a mite and may be cured by a salve composed of two parts coal oil and one part lard.

POULTRY PICKINGS

A little extra care of your hens and a bit of choice feed will pay in eggs many times. Don't be afraid of doing too much. Only be careful that what you do hits the spot.

The Buttercups are a new breed of fowls for which much is claimed. They originated in Sicily and in some respects resemble the Rhode Island Reds. Their champions claim 300 eggs a year as not unusual, but here we beg leave to doubt.

You get more for dressed poultry by picking it dry than when scalded. In picking dry begin near the crop and pluck the breast first. Then take the back near the tail and wings last.

It is hard to make a living from raising poultry on a small spot of ground. Only an expert can do it with success. From five to forty acres of land and at least 400 hens are necessary to support a family.

The Anconas are claimed by their friends to be egg machines pure and simple. They lay right on through the whole year and never set. We fear that their friends are a little too enthusiastic.

The Bantams also have enthusiastic friends who claim they are as good as the best when all the reports come in. They are small, but they eat little and lay a big lot of eggs as well as furnish a sweet morsel of roast that cannot be excelled.

If possible the poultry runs and feeding grounds should be moved every year or two in order to prevent infection from disease germs. Otherwise plow them up and spread lime.

The hen needs exercise the same as a human being. You can't expect hens to have health and lay winter eggs when huddled up in a small space. Give them range and feed in a big scratching shed open to the southern sun.

It doesn't pay to keep hens beyond two years. Don't forget that. Fatten them and put them on the table or send them to market. Every point must be carefully watched for profits.

The weather is something, but the hen is more. Have your hens in a laying condition and they will lay in spite of weather. In fact you may make a little weather of your own by controlling the temperature of the nesting house.

They say blood will tell in horses and cows; then why not in chickens? If a scrub cow is not equal to a thorough-

bred Jersey, why should a scrub hen be as good as a White Leghorn or a Plymouth Rock?

Geese are not like hens. Old geese lay better than young geese, and old ganders are better than young ones. It interferes with their breeding qualities to change geese from one place to another. Geese feed best on grass and much corn is not good for them.

NOTES ABOUT DISEASE

To succeed with poultry you must keep the fowls healthy. Sick hens are poor property and medicine usually does them but little good.

It is easy to keep your hens healthy if you know the laws of health and practice them. They must have dry quarters without drafts in cold weather, pure water, wholesome food, fresh air and sunshine.

Many diseases are produced by a germ which makes them contagious, or communicable. By keeping the germ away you will not have the disease. A vigorous, healthful flock will also tend to resist disease.

To avoid disease keep the premises constantly clean. Whitewash the buildings inside and out and scatter lime over the floor and grounds. Spray the roosts with coal oil or a solution of carbolic acid.

It is said that fowls and birds in a state of nature are never sick. Only when we confine them in close and unwholesome quarters do they become so. The teaching is to follow nature as closely as possible.

Nature teaches us that fowls should have a wide range and that a farm is the best place for them. The chances for success on a farm are as ten to one compared to a city lot.

Watch your flock carefully and as soon as one member shows disease remove it. Better kill it and bury it deep in the earth at once than to leave it to contaminate the rest.

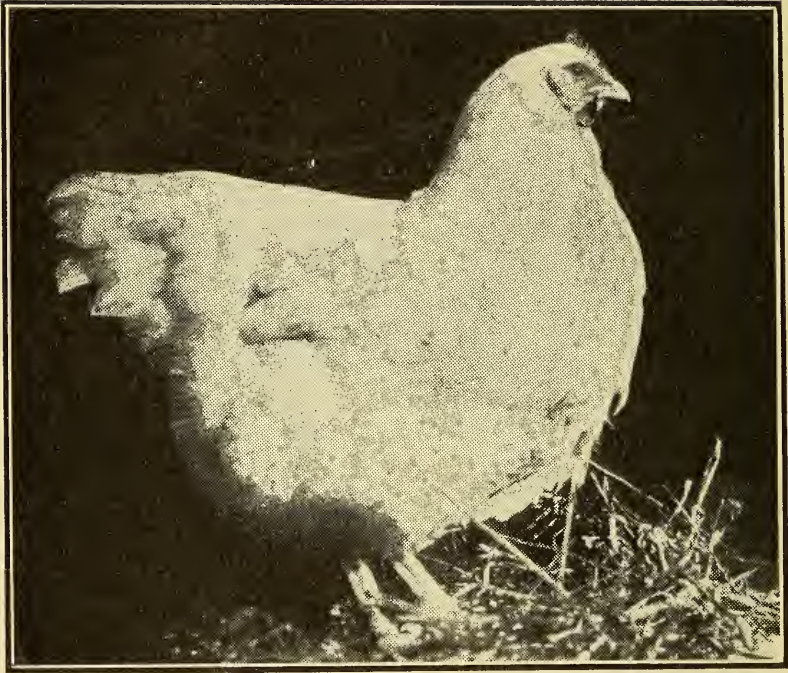
Is the martin pole up? Well, it ought to be. And you want to see that it has seven roomy gourds on it. Hawks will keep shy when they see it.

What did I do with hens that just would "set?" Why, I jailed them in a barrel or a coop, and sometimes I gave them a good ducking in a tub of water.

The fancier gets the credit of practicing art for art's sake and yet he often keeps an eye on the money there is in it.



WHITE ORPINGTON PEN
Mrs. L. L. Upson. Athens, Ga.



S. C. WHITE ORPINGTON PULLET

Mrs. L. L. Upson, Athens, Ga.

TROUBLES OF THE CHICKEN BUSINESS

- Now that the hatching season for this year is over and we look over our flock of youngsters, how many of us see our mistakes in mating and say to ourselves: "If we had only left such a female out of that pen, or if we had not used that male bird, or if we had mated a different way, we would have had better results." Have you said anything like that? I have, and we do it every year about this time; but we go at it again next year and use birds that should not be used on account of their defects in color and shape. And that is why we have so many off-colored specimens and so few good ones; but we should blame ourselves and nobody else, when we do it over and over year after year.

Many breeders in this locality (Ohio) have had poor success with their late hatched chicks, owing to wet weather and chilly nights. Those that were fortunate enough to use hens to hatch their late chicks were all right, but my, oh, my! the incubated ones, how they did suffer with the cold and die. On a damp, cold day the old hen could hover her flock. While the sun shone in the morning the brooder lamp was not lighted, but perhaps by noon the atmosphere had fallen several degrees, consequently the chicks got chilled before the fire could be gotten in the hover and the poor chicks got good and cold. Such are the troubles of late hatched chicks, especially with a machine, whereas with early ones you know that they have got to have heat all the time and you provide accordingly. They seem to thrive better at all times, and you find very few stunted or runty ones among those hatched in February and March. The small ones are usually found in the April, May and June hatched chicks.

Try and have your hens molt early so as to commence to lay in November and December, and push your early pullets to lay in October, because eggs are going to be scarce and prices high this winter—the highest yet—and the fancier is depended upon to furnish the market fresh eggs, as the farmer is not up enough in the game and sells all his early hatched pullets for early fryers, when how nice they would come in this winter for eggs, and how many times over they would pay for themselves, especially at the price he sold them for as fryers? With eggs at 50 and 60 cents a dozen it does not take long for a good layer to make her owner one dollar profit—and that is when chickens pay.—
W. C. McKEM, Hamilton, O.

POULTRY FOR HOME USE

The poultryman could have all the luxuries of the rich, says *Coleman's Rural World*, if he would figure out the expenses of purchasing meats for his table when he has a number of fowls that could be used to advantage at home rather than shipped to market. There are very few poultrymen who have not some fowls that are not marketable without extra care and expense, and these may be used on the family table. If not near a good market, especially, he should aim to use a great deal of the fowls raised on the farm. It is never out of season to hatch fowls for home use. The best birds for the table are, of course, those that have the most breast meat.

The breeds that have the finest carcasses are not always the best layers, but as a rule, unless the poultryman is a fancier, he will have a good solid bird ready for the table instead of one which excels in beauty of plumage and shape. The small breeds are considered the best layers, but while that may have been true a number of years ago, the best layers have to hustle in order to outlay the larger breeds. The Langshans, Barred Plymouth Rocks (which are larger than heretofore), the Cochins and many other breeds which are fine table birds are also good layers.

Raise a number of fowls and if they are not bringing a very good price in market, use them at home and save the expense of purchasing something else. Every farmer should enjoy all the luxuries of his farm, and if he does not he is making a mistake, for there is not a farm, however perfectly managed, that does not produce something which, while it is not marketable, is just as good for the home table as the articles which present a beautiful appearance are for the epicures.

CLEANLINESS VS. VENTILATION

According to the *Farmers Home Journal*, if poultrymen would worry less about ventilation and give more attention to cleanliness there would be fewer losses. Ventilation is all right, and is not condemned, but houses built on the scratching shed order should supply all the ventilation that is needed. And no amount of ventilation will make up for lack of attention to cleanliness in the hen house.

Poultry can't be managed like animals. You may punish your horse or your dog but you must love your birds into having them do what you want.

FOOD FOR LAYING HENS

The hen in best laying condition has surplus fat. This means that her bodily wants have been supplied and there is some food to spare. She has surplus energy. A very fat hen seldom lays well. A poor hen cannot lay well. The first part of the egg to be formed is the yolk, which contains 30 per cent of albumen and 64 per cent of fat. Food is first used to maintain the body. New growth and production generally comes from the surplus after the bodily wants have been satisfied. Therefore new eggs will not develop until there is surplus fat to form the yolk.

A very fat hen does not lay because her condition has become one of debility, and because her tissues are weak and flabby. Fowls are naturally grain eaters. A large part of their food therefore should be the cereals. Note the wide variation in the composition of the various grains, each one of which has its own peculiar flavor and value. Corn is an excellent grain. It is perhaps the grain most relished by fowls. Therein lies the danger. Fowls eat it so greedily that it being a fattening food they are likely to become overfed when it is fed too freely. When properly cooked, through fed every day, no evil results will follow. Wheat is perhaps the best grain for poultry, and its by-products are among the safest and most satisfactory of foods. Heavy oats are perhaps next in value, light oats are a delusion. Peas are the richest, and one of the best of poultry foods. Barley is excellent.

These are the observations of an Australian poultryman and they will apply to our country also.—*Coleman's Rural World*.

BRAN AS A POULTRY RATION

It is well known that bran is a highly nutritious food. With reference to its value as a poultry ration, the *Farmers Home Journal* says that bran contains more phosphates and mineral matters than other ground grains and it is also of great assistance in regulating the bowels, especially when a small quantity of linseed meal is given with it. In warm weather, however, it is not wise to give it more than three times a week. In winter it is excellent scalded and mixed with cooked vegetables, or is also beneficial when thrown dry into a mess of chopped vegetables or meat. If bran is used in the summer and the fowls have a range, no other food need be given, but in winter it is necessary to balance the ration with vegetables, meats or bulky materials.

FARM NOTES

Poultry on the farm is of course a side issue, but with intelligent work and care it may be made a very efficient one. A farm without poultry would be something strange to see. This fact itself shows how universal its importance is realized.

As a rule the care of poultry on the farm must go to the women folk in order to be certain that it is not neglected. The "lord of the manor," in the multiplicity of other duties, would be prone to overlook his fowls.

If your farm is near a city of large hotels, restaurants, and club-houses, a good thing may be made of plump young chicks, termed squab broilers. At seven to eight weeks old, when weighing three-quarters to a pound each, they often bring as much as one dollar a pair.

If the farmer is troubled with chicken thieves he should keep a double-barrel shot gun handy and let it be known that he will shoot to hurt. I wouldn't take life, but I should try to disable the thief's power of locomotion so that he could not get away.

When you get eggs by rail from a fancier take them out of the basket and lay them away to rest for twenty four hours before setting them to hatch either under a hen or in an incubator. This is to let the germ settle and secure a better hatch.

HOW TO FATTEN

When fattening your chickens it is a good plan to begin by allowing them no food for a day and night, after which commence to feed gradually increasing amounts for four or five days until you are feeding all they will eat without wastage. Feed three times a day for two or three weeks; then two feeds a day will probably enable your chickens to keep on piling up the fat. Feed all they will eat, but don't have feed lying around that is apparently not wanted, for you are feeding too much at a time when this is the case. Of course plenty of pure water should be convenient for the fowls to get at at all times, and an abundance of grit should be supplied.

Time is money. It sometimes pays better to sell your entire output to the wholesale man rather than consume time peddling it out to Tom, Dick and Harry, and worry with collections.

THE 200 EGG HEN

The fact seems to be dawning that the 200 egg hen is a freak and not a regular production. Other poultrymen besides those of the Maine Experiment Station have found by experience that the daughters of 200-egg hens are by no means likely to produce so well as their mothers. In fact the chances are the other way. After an attempt at development for ten years, the Maine Station fell from an average of 136 eggs a year to 113 eggs. The whole subject seems yet somewhat involved in the mists of uncertainty. We may have been mistaken in some of our facts, even about stock breeding. After all there does not seem to be certainty in the law that like produces like when it comes to the principle of fecundity—at least as regards hens. Some mothers of smaller laying capacity produce daughters that far exceed the daughters of 200-egg hens. Breeders will evidently know more about this matter later on. Is there an average breed limit beyond which it is not possible to go? If so, is not the hen that lays 200 eggs and more a possible freak to which our average cannot be raised? Does not the abnormal fecundity sap the vigor of her offspring so as to reduce their laying capacity in most cases?—T.C.K.

POULTRY SIFTINGS

There need be no fear of glutting the market with eggs. Every man, woman and child in the country, says *Texas Farm and Ranch*, ought to get one egg a day every day in the year, and until this end is accomplished there can be no overproduction of eggs. Two eggs a day could easily be disposed of in the various and sundry manners in which eggs may be entertained as human food. But one egg a day would be about 27,375 millions of eggs per year, or 2,273 millions of dozens, worth at least one cent per egg, or twelve cents per dozen, making \$273,750,000. Don't be afraid of glutting the market. At this price eggs are cheaper as well as a better food than the best loin of beef.

A poultry publication says: "Don't imagine once a week cleaning out the drinking vessels is all that is necessary. Do it every day." That is good advice as far as it goes, but on a large poultry plant if the drinking vessels were cleaned out once a week it would be a good thing. The truth is that the drinking vessels are too much neglected. With cleaner vessels and cleaner houses there would be less cry of "cholera" and mysterious diseases.

The city health office of Nashville, Tennessee, made a

test to determine whether poultry drawn and packed in ice would last longer than poultry undrawn and carried under the same conditions. A half-dozen drawn chickens and an equal number of chickens not drawn were placed on ice for some days and then examined. The result of the experiment showed that the poultry packed undrawn kept better, being in good condition, whereas the drawn poultry had deteriorated materially.

There is a notable difference in the composition of the white and the dark meat. The former has much less fat, and a correspondingly large quantity of protein. The quantity of water is not very different in the two classes, although there is slightly less quantity in the dark meat. The latter has a much larger proportion of meat basis but as these basis are often considered of little value and sometimes degenerate into poisonous constituents, it is seen from this point of view that the white meat is to be preferred to the dark meat.

H. S. Babcock says if more open sheds were built, to be closed in stormy weather with cheap canvas, there would be less sickness and better results. Of course it would not be wise to throw open the houses in the dead of winter, but if they were kept open and not closed up every cool night in the fall so that the fowls would be hardened gradually, the birds would suffer less than they suffer in close houses. As this method of housing is economical, it is well worth trying.

We believe in trained cats on a poultry farm. The writer has had as many as fourteen cats on his farm at one time, and never lost a chick by any of them. The cats are well-fed, but not overfed. Raised from kittenhood up among young chicks, they quickly learn that they must not touch them. We have had cats jump right among a flock of young chicks that were feeding, to catch a bold sparrow that was helping itself to the feed, and yet not molest a single chick. Many a good cat has been killed for an act committed by another animal. Rats are worse chick thieves than are cats. They work silently and stealthily, and before one knows it a whole flock of growing chicks is massacred. It is hard to dislodge a colony of rats where trash is allowed to accumulate about the place.

If your pullets do not lay well this year that is enough. You need expect nothing better next year, for the first is their best season.

MAKING SHAM PREPARATIONS

I AM aware it is contrary to human nature to make preparations for future events, even three months in advance; however, the breeder that expects to make a "killing" at the shows, should lose no time in preparing his birds for exhibition. It is an easy matter to postpone this task, but it is not so easy to win first honors. As a rule the procrastinating exhibitor will always lose out and nine times out of ten will blame the judge or some of the show officials for his fate. The breeder that declines the preparing of his birds until the very last minute will enter the show room greatly handicapped by reason of having his birds out of condition. Very frequently a bird is out of the winnings just because of lack of preparation. It's no uncommon thing to find a bird without a lack of real quality other than gilt-edged conditioning for the event. I am confident the noted Orpington breeder, William Blackhurst, of Pacific Coast fame, has many winnings to his credit that he would have lost had he not had his birds in first-class condition for the shows he made. I heard it spoken of him frequently that "Blackhurst is the best conditioner the world affords." I am aware he has top-notch Orpingtons, but the condition he puts on them and the quality he possesses, coupled together in the show room, makes it hard for his competitors to get a place in his company. The conditioning is quite a feature in a high-class exhibition. The expert horseman thoroughly grooms and trains his horse for the speed ring. The same is likewise true of the expert poultry exhibitor. I know from experience that it is hard for a judge to get the proper shape of a bird that will crouch up in one corner of the coop, absolutely declining to pose for his ideal shape. Again, a breeder that will send his birds to the show room all nailed up in a board coop, rendering it next to an impossibility for the judge to get to them, should not be allowed to compete for a prize.

Just recently the writer was passing on a class of Leghorns at a well-regulated show and finding one of the coops nailed up, rendering it impossible to gain an entrance without the aid of a hammer and chisel, I passed them down. Through the sympathy of the superintendent for the exhibitor, he procured some tools and made an entrance into the coop. To our surprise we found birds superior to anything in the class. It was only by a game of chance, in a measure, that this party received any attention whatever. So

I say, its the proper preparation for the event that adds laurels to our list of winnings. It's very common to find birds half scared to death on approaching the coops, while birds of the same variety in the same class, will pose and stand up in the most dignified manner, as if to attract particular attention from the judge. This of course is due to intelligent training and careful preparation for the show room.

It will take but a little of your time to practice with your show birds each day prior to the show to get them to display the most striking appearance. Fowls just caught up off the range and taken to the show seldom ever appear in the best show condition, while I have seen birds win highest honors without the least bit of attention before the show. Of course there are exceptions to all rules. However, the breeder that makes a practice of doing things in the best possible manner and at the proper time will in a majority of instances win the leading prizes. The breeder that is thoroughly on to his profession will now be preparing his choicest birds for the December and January shows. It is not necessary to force the birds now, but little by little, add to their fine feather and form, so that by the time the birds are due to make their appearance at the show they will display a striking appearance far above your procrastinating competitor. Remember pounds can be added very quickly, but it requires time and attention to grow fancy plumage and typical form of the breed it represents. It is as necessary to train birds for the show as it is to feed and have them in the best possible flesh. Place your birds in the show coops and groom them every day. Grooming puts the brilliant finish to their feathers, and confining to the exhibition coops soon gets them accustomed to their small quarters, avoiding a crash by suddenly placing them in close confinement during the exhibition. Ordinarily it will be time well spent to give your birds at least two months training, or three, if possible, prior to the show.—J. C. CLIPP.

It is the man who gets down to details that wins in the poultry game. It is hardly possible to sit in an office and run business successfully by telephone.

To be successful the hen must be kept cheerful and happy, and the way to do this is to keep her busy. Give her plenty of scratching room by all means.



S. C. BUFF ORPINGTON COCK
Mrs. S. C. Bridgewater, Dixon Springs, Tenn.



BUFF PLYMOUTH ROCK COCKEREL
J. C. Clipp, Saltillo, Ind.

COMMON MISTAKES OF FARMERS

Perhaps the commonest mistake farmers make in handling chickens is in keeping old hens when they ought to keep pullets. Very few hens lay enough eggs after their first year to pay for their keep. The farmer ought to sell off his hens in their second summer and replace them with early hatched pullets. Mr. Bayne, editor of *THE INDUSTRIOUS HEN* tells me of an experiment he made which illustrates this point. He compared a flock of 60 pullets with two flocks of mixed hens of all ages, one of 215 and the other of 175 hens. The pullets were properly fed, while the hens "scratched" for a living. Counting the cost of feed for the pullets as twice that of the hens, the pullets produced eggs at a cost of 12½cents a dozen, while the corresponding figures for the two flocks were 34c and 36c. Many other similar illustrations might be given. There is no question that it pays to replace hens with pullets. Never keep a hen two years unless she is an unusually good one, whose eggs you want for hatching purposes.

Another mistake most farmers make is to keep the males with the females all the time. Of course it is necessary to do this when fertile eggs are wanted, but it is a mistake to produce fertile eggs for table use. The presence of the males add nothing to the number of eggs produced, and it does cause eggs to spoil more easily in hot weather. A fertile egg will begin to develop if the weather is warm enough. Cut out the males except when eggs are wanted for hatching.

It has always been a cause for wonder that a farmer should sell eggs that are not strictly fresh. There is little excuse for so doing. Buyers ought to discriminate between fresh and stale eggs. In the city markets, really fresh eggs sell for several cents per dozen more than other eggs. It is easy to make a reputation on strictly fresh eggs, and every farmer who sells eggs ought to market them strictly fresh.

It goes without saying that hens must be properly fed if they are to do good work. He who keeps only a few hens ought to study the question of feeding. It will pay large dividends on the time required to learn how to feed hens.

There is really no excuse for keeping scrub stock. I am told that in this community well bred cockerels can be had for \$1.00 each. This is a remarkably low price. A good young male, one that is from an egg laying strain, is worth

much more than this. Not only will his pullets lay more eggs, but the broilers will grow faster than scrubs. Mr. Bayne tells me of 100 chickens 4 months old which he separated into three classes and weight, the grades weighed $\frac{1}{4}$ to $\frac{1}{2}$ pound more, and the pure breds weighed $\frac{3}{4}$ to $1\frac{1}{4}$ pounds more than the scrubs. It is so easy to get good stock by securing each year a few good young males that there is no excuse whatever for keeping scrubs.

In closing I wish to call attention to Farmer's Bulletin No. 355, issued recently by the U. S. Department of Agriculture. It gives a detailed account of the methods used on one of the best poultry farms in America. This bulletin was not written for chicken fanciers, but for plain everyday farmers. It costs nothing but a postal card to get it. Every farmer who keeps hens should send for it.—W. J. SPILLMAN, U. S. Dept. Agriculture, Washington, D. C.

FARM NOTES

Keep all coops and poultry houses nicely cleaned up this hot weather. It is the only way to keep farm flocks in good health and vigor.

The farm should be kept free of the gape parasite. Read up a full account of the disease in your poultry books and learn how to banish it.

Be careful about ventilation these hot nights. Have openings at each end near the roof as well as near the ground to give free circulation of air.

Women are better fitted than men to care for farm poultry and should have supreme control, but with the assistance of men to do the hard work.

When the vegetables are well grown and not likely to be damaged drive your poultry through the garden and let them devour the insects and worms they can find.

The average farmer may not carry out all the arts of the fancier, but he can do good, practical work in poultry and should not be content to slur over anything.

Don't fail next winter to take the short course in poultry at your State Agricultural College. The expense will be small and the instruction and experience valuable.

Young ducks can stand drabbling but as soon as they grow up to good size they give much trouble by wandering down stream and getting lost.

WISE WORDS BY UNCLE BEN

You can't get any best specialty out of a general purpose fowl. Yet an average of good points suits most farmers best.

If you want eggs in winter, select a strain that has been bred in that direction. The strain for winter laying is more than the breed.

Keep the nest clear of broken eggs. They tend to make egg-eating hens. Clean up the other eggs with a cloth dipped in warm water.

You can't succeed with poultry without study. You must also love your birds and find a pleasure in the business. If you lack in all these points, hunt up another profession.

Don't lime your poultry houses in winter. Fumes from lime irritate the nasal passages and cause catarrh and roup. Under such circumstances the fowls catch cold more easily.

Speaking of egg-eating hens—this vice is taken up by hens that do not have sufficient meat diet. Give them plenty of meat scraps or bugs, worms, and insects and they won't eat eggs.

Hens turn their eggs twice every day. This is where many incubator people make a mistake. Incubator eggs should be handled just like the hen would handle them. Better let the incubator alone unless you are smart enough to learn nature's ways.

Some say poultry doesn't pay, but that is not correct. It is like other business and pays according to the way it is run. A writer in *Farm and Fireside* tells of a renter who cleared over one thousand dollars last year on an investment—houses and all—of not over two hundred dollars.

In feeding give your hens variety. Corn will not give a satisfactory supply of eggs. Give a cracked wheat dinner or an oats supper every now and then. Once or twice a week try wet mash. Feed all your grain in litter. It is nature's way to have the hen scratch for her dinner.

POULTRY PICKINGS

A troupe of young turkeys are the best hands to clear your meadows of grasshoppers. They certainly make them pay for their keep.

Wintering fowls in the South is much easier than in the North. We rarely have snow and bluegrass grows green for grazing all winter, grit may be found and often worms and bugs.

To get eggs in winter we must treat our hens right. They must have a warm roost, and for feed wheat and oats as well as corn. Corn makes plenty of heat and fat, but is poor for eggs.

A writer in a Southern poultry journal advocates capons to care for young chicks instead of a brooder. He claims a successful experience but somehow we are inclined to doubt its general practicability.

Chickens, like people, must have exercise. Let them scratch in the woods and range the fields for grass, weed-seeds or whatever they may find. Then feed them in a litter when more exercise is necessary.

Build the poultry house on an elevated, well-drained spot of ground. For the sake of health there should be no dampness about the premises. Dampness also curtails the egg production, especially in the winter.

Unless you want eggs to hatch, roosters are not needed with the hens. They lay better without them. For commercial eggs roosters are a dead expense and a nuisance. Infertile eggs keep much longer and better.

When the farmer buys fine eggs for hatching he should remember that they are to be handled with care. No jolting in the wagon and no exposure to freezing cold. Get them under the hen at once and see that she has everything all right.

It is very foolish to mix bad eggs with good, for then all must be sold at the price of the poorest. Some merchants buy mixed country lots at 15 cents a dozen and after sorting them get 20, 30 and 40 cents a dozen for them.

A special reason for woodland range for the hen is that she can scratch up so many slugs and worms, and pick bugs and beetles from rotten wood and under bark, and catch all kinds of insects in various places. These give proteids which are so necessary in egg production.

Your breed must be selected with purpose in view. Do you want eggs? Do you want meat? Or do you want eggs and meat combined? Each of these purposes has its special breed or breeds. You must go over the whole field of your conditions and then select for yourself.

It pays every farmer to have a poultry-wired yard for his fowls in which they may be inclosed when desirable. Of course they do better with wide range unless very carefully tended, but now and then you may want to shut them in to keep them off certain crops or for other purpose.

THE PEKIN DUCK

The Pekin duck is of Asiatic origin, and was imported to this country from China, about thirty years ago. Hughes says a traveler who saw them about the streets of Pekin, mistook them for small white geese at first, but upon finding that they were ducks, was so greatly impressed with their snow-white plumage and noble carriage that he secured some of their eggs. They were brought to Hong Kong and hatched, and in due time the birds were shipped in a vessel bound for New York. A number of the ducks died during the long voyage, but from the rest sprung this popular breed that is now met with in nearly every State of the Union.

Don't leave feeding the hens entirely to the hired hand. To be sure of eggs this is one duty that the farmer must look after a little himself.

WHAT GRANDMA SAYS

In the main it is the wife's business to look after farm poultry but her husband should build all necessary houses, coops and yards.

We are all too careless about keeping our roosts and houses clean, and we don't have half enough nice nests for the hens to lay in.

If you expect any profits in the fall don't allow your hens to drabble young chicks in tall grass during the spring and early summer.

Place your nests so they will be somewhat concealed from observation. Hens don't like to nest in a public place. The more concealed the better.

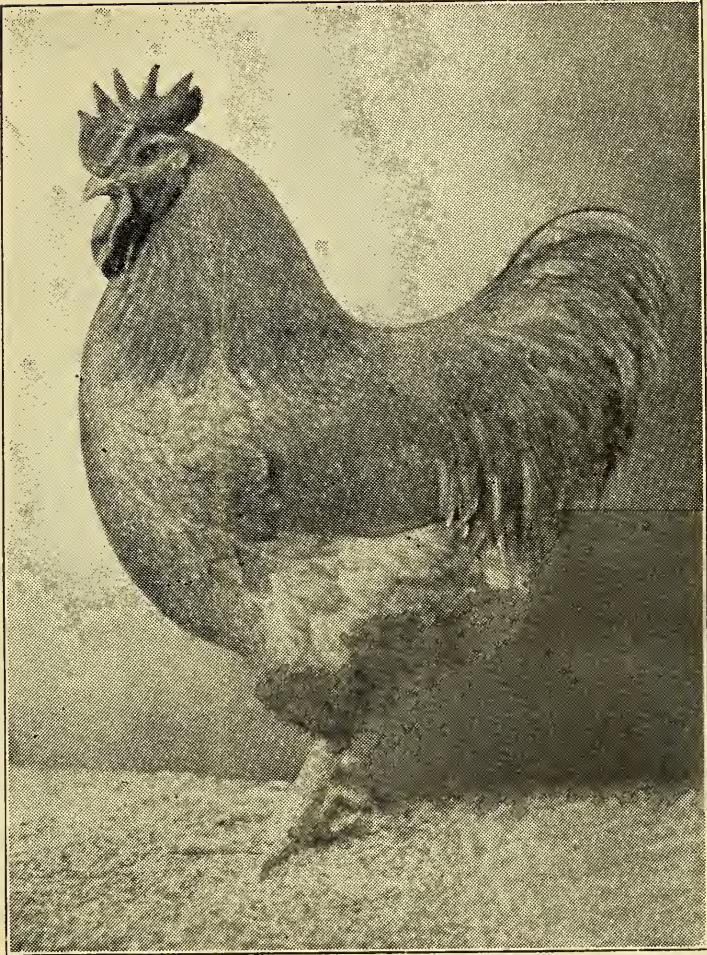
In the old days we mixed our breeds. We thought this made better chickens. It generally does for one generation, but after that they rapidly run out.

Put up a martin pole with seven gourds on it to keep the hawks away. A round rock buried in the ashes of the fire-place doesn't act so well as it did in your grandmother's day.

When a hen came off with a fresh brood my mother used to tie one end of a carpet string to the hen's leg and the other end to an apple tree. The hen was thus held captive for many days. Who can tell why?

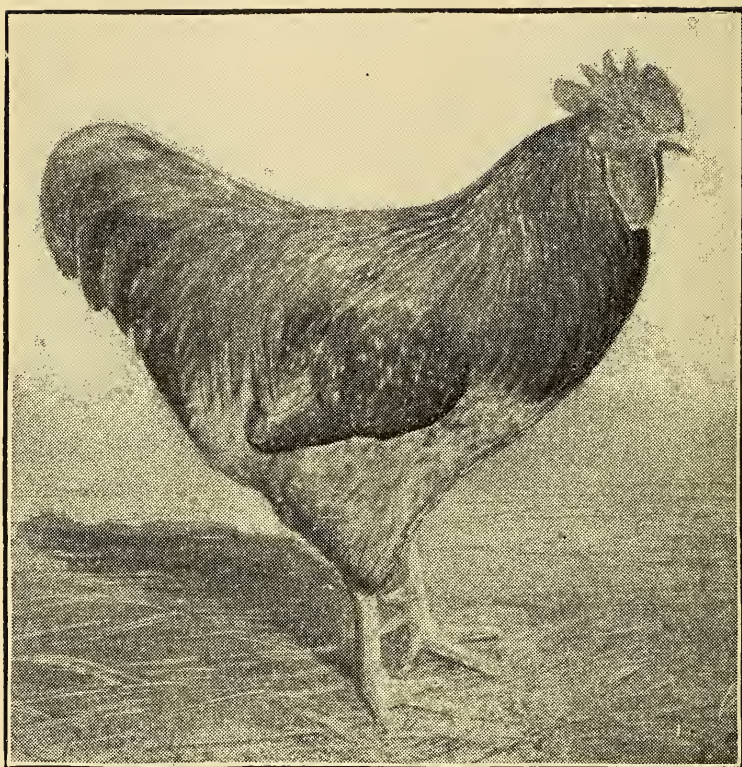
If you don't give your hens satisfactory nests they will steal off and lay in the weeds. Then you may not find the nest for several days and some eggs will be spoiled. The side next to the ground spoils in a very short time.

I now see that the best way to breed up is to stick to one breed and every year select the best cockerels and pullets from the young stock. To get best layers I save from the eggs of



S. C. BUFF ORPINGTON COCK

T. W. Rogers, Lamont, Iowa



S. C. BUFF ORPINGTON COCKEREL

W. H. Ballard, Memphis, Tenn.

my best laying hens. New blood should be introduced by fine roosters of the same breed from other flocks.

One great disadvantage of mixed breeds is that your eggs will be mixed in size and color. Eggs of uniform size and color sell best. If your customers are prejudiced in favor of any particular color, that is the one for you to produce.

Don't feed your fowls so they will eat too much at once. Don't throw out food for the whole flock to scramble after. Some will get too much and some too little. Feed through hoppers or better still have scratching sheds where the feed can be scattered in a litter of straw or leaves and obtained at leisure by scratching.

WHAT OTHERS SAY

According to the last census the value of laying hens in the United States was \$70,000,000 and they lay annually 203 eggs for each inhabitant, and these eggs weigh more than all the pork, beef, tallow, ham, bacon, and sausage exported.

The same authority gives Iowa as the greatest egg producing state, the number being 100,000,000 dozen every year. Illinois comes next with 86,000,000 dozen each year. The annual product of eggs in the United States is \$145,000,000. Great is the American hen.

Irving Rice says that the fancier alone has brought up the Leghorn to the great perfection it enjoys in America to-day. The utility breeder has had no hand in it.

Dr. P. T. Woods says there are a number of one-man egg-farms in Rhode Island that make \$1,000 a year and over to pay for the owner's labor. They are in the business for life and their methods are very simple.

Cal Husselman says the prepared chick and poultry feeds are a delusion and a snare. You do not know what they are. A few acres of land will produce all the special crops necessary and wheat, corn and oats can always be bought from first hands at market price.

WISE WORDS BY UNCLE BEN

If you would avoid limberneck allow no dead carcasses or maggots on your farm.

Every farmer can have plenty of chickens and eggs if he will. They save meat and are more wholesome than so much bacon. Chicken soup for dinner now and then is certainly fine.

Letting chickens roost in the trees is now out of date. Pure air is necessary but it is better administered under cover where there is no interference from snow and rain. Also cold winds are known to interfere with laying propensities.

Do you notice how regularly your chickens pick grass even in the cold days of winter? Grass should be provided for them all the year round. Bluegrass is the best as it stays green all winter. Sow seed all around the house and barn and outbuildings.

If you want plenty of eggs by all means have a woodland range for your hens. Then scatter cracked grain in the leaves where the hens must scratch for all they get. Nature fashioned the hen to feed in this way and man can't change her habit with impunity.

OLD HENS UNPROFITABLE

Old hens soon become unprofitable and should be sent to market or put into the home pot. Usually a hen's best year is her first year. After that she degenerates gradually. It does not pay to keep her after the second year. In this we speak of eggs for commercial purposes. Of course breeding stock may be kept for an indefinite period for the sake of their progeny. One reason that old hens are not in less favor is that their owners rarely know just how little they do lay. The trap nest tells the tale.

ARE THE AMERICAN HEN'S EGGS TOO SMALL?

"Eggs laid by the American hen are too small" if we are to accept as correct the statement of Dr. Harvey W. Wiley, Chief of the Bureau of Chemistry, Department of Agriculture. He says that "a hen has just so much egg-producing capacity, taken in bulk, and that the aim of breeders is to increase the number of eggs by reducing their size. We should buy everything by weight. In France the law has gone so far as to make provision merchants sell eggs by weight, instead of by the dozen. Here we stick to the dozen. What is the result? Why we get the smallest eggs that can be produced. The principles of breeding are applied to hens in such a way that they are laying the smallest egg possible. In an egg we get less and less weight by nutriment, so that the hen will be able to lay more eggs to be sold at a rate per dozen."

The editor of *Poultry* differs somewhat from the conclusions of Dr. Wiley concerning any noticable tendency to promote the production of small eggs, but agrees with him that eggs should be sold by weight. He says:

"Dr. Wiley's argument is not a strong one as there is no observable tendency to promote the production of abnormally small eggs in this country. The average egg weighs two ounces and we believe we are safe in saying there is no tendency for the size eggs to decrease. As a matter of fact breeders all over this country are inclined to boast about the size of the egg their flocks produce, when they have reason to do so, and the man who breeds large-egg Leghorns will have no trouble finding buyers for his stock. We are in full sympathy with any movement that will make for selling eggs by weight as that is the only logical way to sell any food product. In Australia one of the rules of the Laying Competition is that eggs below two ounces in weight shall not count and the result is that hens that lay small eggs have disappeared from the competition."

For years there have been those who advocated the selling of eggs by weight, and while that may be the most "logical way" from a consumer's standpoint, we are inclined to doubt whether it will ever become customary in this country. If the breeder will furnish us good, sound, fresh eggs of a reasonable size, the buying public will not, we think, become incorrigibly insistent in its effort to bring into use any radical change in the method of dispensing so common an article as eggs. We think the new way too inconvenient to harmonize well with out hustling, hurrying American ways.

TO MAKE HENS LAY

J. M. Jordan, an old Methodist minister of Fayetteville, Tenn., publishes this formula to promote egg production:

Ten pounds of bone meal, ten pounds of beef scraps, five pounds frunigreek (from drug store,) two pounds sulphur, ten pounds of charcoal, one pound cayenne pepper, one-half pound salt, mix well. Put one-half pint of this mixture for every 20 hens in a moist mash made of wheat bran, crushed corn, oats and wheat, and feed what they will eat three times a day. If you have pullets old enough to lay, take them off the range and confine them in warm dry houses and feed them this ration and you will certainly get eggs.

THE FARMER AND HIS CHICKENS

"It seems strange," says a writer in *Useful Poultry Journal*, "that the average farmer, who will take good care of his cows, his horses, pigs and sheep, will let the poultry shift for themselves and not furnish them much to shift on, either. Usually their house is an old shed in too poor a condition to keep anything else in, with leaky roof, cracks in the side for ventilation, some old poles for perches, perhaps not cleaned out more than once a year, a good breeding place for lice but a poor place for poultry if you expect it to pay.

"Now change this plan and take care of your poultry as you do your other stock and see how quickly they respond to good treatment and become the best paying property on the farm. If you have no time yourself turn them over to your wife, daughter or boy. Furnish them a good, warm building where they can be kept clean; use judgment in feeding, give a variety of all kinds of grain, not too much corn, except at night in winter; have fresh water before them all the time (you will probably be surprised to see how much water they drink). Give them the scraps from the table, and green vegetables, chopped fine, occasionally. The small potatoes boiled makes an excellent feed for a change. Keep plenty of grit and oyster shells where they can reach it easily, and a little charcoal also. Try this plan for a while and keep account of all expenditures and receipts, and I am sure that your poultry will pay.

"Don't keep poor stock. It does not cost more to feed a well-bred flock of Leghorns, Wyandottes or Plymouth Rocks than it does to keep scrubs that weigh from four to five pounds each. Sell off the old stock for what they will bring and start in right with a few full-blooded birds that you will

be proud to see about the farm. At this season you can buy first-class stock very reasonable, and now is the time to make your start. Remember that poultry does pay.

"Leghorns are good foragers, because they are light birds and get about quickly. They roam much farther afield than some of the heavier breeds. They are thus cheaper to keep on the farm than some of the breeds that show an inclination to hang about the barns and sheds and wait for feeding time. Besides, they are more useful from the standpoint of insect destroyers. This is a matter of considerable importance in some years when the grasshoppers are very numerous. The foragers get a better quality of food than the birds that depend upon getting grain feed, for the reason that the insects are very rich in nitrogen. For the general farm, it is doubtful if any breed excels the Leghorns so far as looking out for themselves is concerned."

HOW MANY HENS?

Somebody is always asking how many hens can be kept on one acre of ground or how much space is required for each hen in the poultry house. It is not safe to give an exact answer to such questions for "circumstances alter cases" always. Some owner might keep 400 hens on an acre of ground and come out all right. Another might fail with 200 or even with 10.

It is the same way with space in the poultry house. We may assign a general average but no exact rule can be laid down which will apply to all alike. It seems to be a fallacy in the minds of many people that everything they do must be worked out with the exactness of a multiplication table. It is a mistake to think that anything but pure mathematics works out in that way.

Some folks get the idea that every hen and every cow must be fed exactly the same ration. This is all a mistake, for they have different appetites and different physical demands. It is all right to have an ideal average ration to serve as a guide but it must not be expected to work out individually.

With regard to space, your poultry need all they can get or all you can afford to give them. This is especially the case on the farm. The hens do better to range far and wide in gathering up their own proteids in the way of insects and worms. Fence in your garden and let the hens run. That is the old way, but it is the best one. Of course this means only one breed, and that also is best.

RAISE SMALL FLOCKS

Small flocks of chickens produce more eggs, proportionately, than large flocks. This is because the small flocks receive more attention than large ones. When keeping chickens becomes disagreeable because of too much work, the fowls are soon neglected and the profits fall off. The average farmer's wife cannot care for a flock of 100 to 200 hens and do justice to the work. A few chickens offer an amount of work that any woman can afford time to attend to. It is useless to keep more chickens than one can profitably care for. Table scraps given to a small flock will save considerable outlay for feed and keep the hens healthy and cause them to lay well. Where but a few hens are kept symptoms of disease are soon discovered and easily combated. In a large flock one sick bird may infest the entire flock before it is noticed. To keep the hens laying, care should be taken to keep the hen-house clean and free from mites.

FEATHER EATING

The habit of pulling and eating feathers is common among fowls confined. No cure of this habit, once acquired, is reported, and it is best to kill the fowls for table use at first sight, as they quickly teach others the same fault. The cause is doubtless a need or appetite for something contained in the feather. A mixture of dried flesh and bone, specially prepared for poultry with a small quantity of sulphur, will act as a preventive. Bits of fresh lean meat, or corals of finely powdered fresh bones, will answer. Another remedy is to give them a sheep liver to pick, hanging it within reach. Also feed wheat scattered in the earth or litter of their houses. This will give them food and work.

GAPE CURE

Gapes are the result of parasitic worms in the windpipe. One cure is to dislodge them. This is sometimes accomplished by placing the chicks in a box covered with muslin and dusting fine lime through the cloth. The chicks breathe the lime, and, as it comes in contact with the worms, these let go of the membranes and are dislodged by the coughing and sneezing caused by the lime. To prevent gapes, keep the chicks on ground where fowls have not previously been. This may be done either by spading old ground deeply, each year, or keeping them outside the poultry yard.

HOW I TAKE CARE OF NEW HATCHES

On the morning of the twenty-second day, says a writer in "Spare Moments Magazine," the chicks are removed from the incubator and placed in a basket lined with cotton batting. Then a good warm flannel cloth is thrown over them so there will be no danger of chilling on their way to the brooder.

The temperature of the brooder should be about eighty-five degrees and soon will go up to ninety degrees when the chicks are under the hover. I leave them alone until afternoon with nothing to eat but the clean sand with which the floor of the brooder is covered. About four o'clock, as the chicks are now from thirty-six to forty-eight hours old, I give them their first feed of hard boiled eggs chopped very fine. I also place before them a small drinking fountain with luke warm water in it, and a dish of fine charcoal.

After they have eaten all they will, I see that they are all under the hover and that the temperature is correct. Just before going to bed I look at them again to see that all is right.

The second day if it is not too cold I open the door so the chicks can run out into a small inclosure. During the first few days they have to be looked after often to see that none get chilled.

I now keep the brooder floor covered with fine cut clover and give them a good commercial chick feed about every two hours gradually lengthening the time between feeds so they will be fed but three times a day. When they are a week old I keep a small hopper filled with a good dry mash mixture and fine beef scraps before them all the time. Green food such as chopped cabbage or beets is given daily. This with the grain keeps them growing at a good rate.

The heat in the brooder after the first week should be gradually reduced so by the end of four weeks no artificial heat is necessary.

PROFIT FROM THE POULTRY YARD.

YOUR hens may lay well for several days, after which a drop-off in the number of eggs may be noticed. This doesn't mean they are going to play "quits" for good. Continue your regular feed and care and they will get back to business soon.

Sudden changes of food, roosting quarters, etc., will retard egg production.

An ideal drinking fount for little chicks may be made

from a quart tin can such as tomatoes are put up in. Melt the rim off the end and cut or file a V-shaped nick in side of can one-half inch up from edge. Fill can with water and place a plate or tin top one inch deep over top and quickly invert.

You will find it a profitable plan, just before retiring, to see that the brooder is in proper condition for the night. If the chicks are quiet they are comfortable and need no more heat; but if there is a scramble or commotion among them, some are trying to get underneath others or in the center of the bunch, and a little more heat will quiet them. I believe that the lid of brooder should be raised a little at all times to supply fresh air unless it is very cold. Those who have gone to their brooders the first thing in the morning, and upon raising the lid, caught a whiff of the foul air, will agree with me.

Not more than fifty chicks should be put in a one-hundred brooder. This may seem somewhat expensive to some, but the fifty chick man and a one-hundred brooder will be more than apt to come out the gainer.

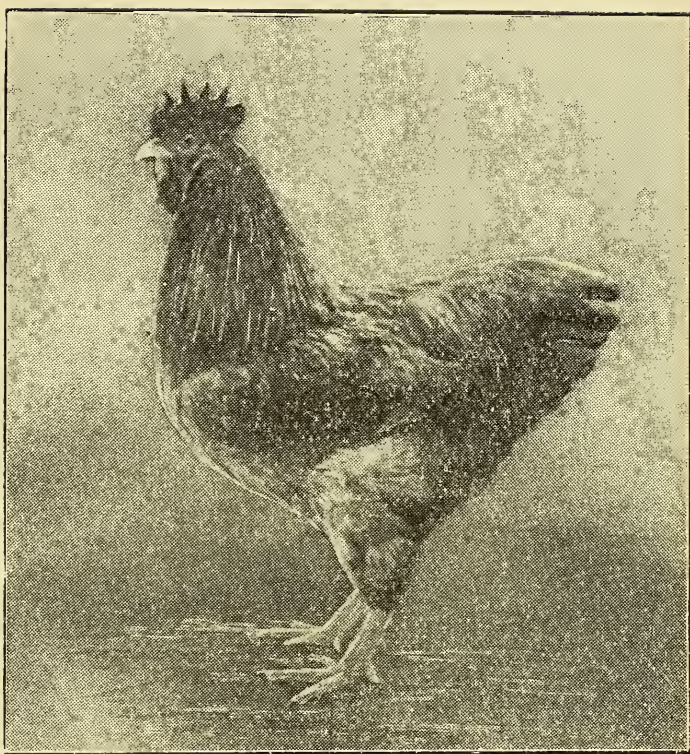
Some recommend warm water (blood heat) for chicks. I hardly think chicks will do well on it. Water from the well is the kind mine get.

I have had several letters from readers of this journal asking what to do for diarrhoea in chicks. One of my plans, or treatments is to pound to a powder charcoal; put the powder into a cup, fill with water, allow to stand for a short while, strain through a fine seive and give the chicks this water for drinking. It is a good plan to use the water whether your chicks are sick or not. It aids digestion and also maintains the health of the chicks by acting as a purifier of the general system.

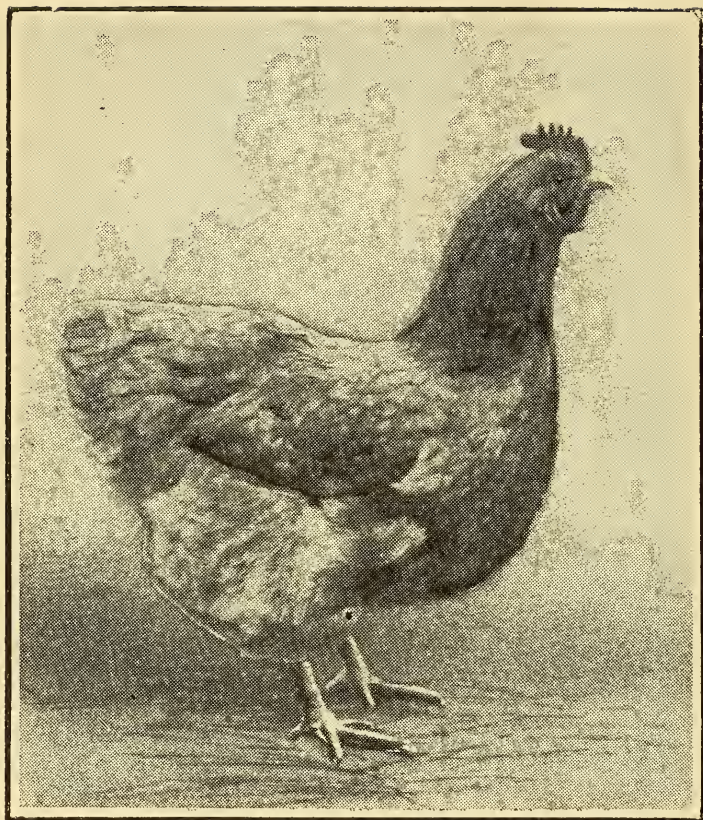
In caring for chicks don't allow yourself to be ruled by everybody's advice. They are nothing but chickens, hence should not be treated as hothouse plants. Give them proper care, feed, exercise, warmth, etc., and they will be grown long before you look for it.

Think twice before you act once, and be on hand at a regular time to see about the chicks.—J. A. THORNHILL, Hartsells, Ala.

The trap nest is a regular detective. It tells the facts of the case, it tames the hens, it gives accurate reports, it arrests the robber hens, it gives an honest count, and it exposes the fraudulent hens.



BUFF ORPINGTON COCKEREL
Paul and Hubert Mason, Shellman, Ga



S. C. BUFF ORPINGTON PULLET
Paul and Hubert Mason, Shellman, Ga.

PROFITABLE TURKEY CULTURE

IT would be almost useless for me to repeat that turkeys are one of the best paying fowls on the farm. Geese and ducks are profitable as well as turkeys. The Southern people are well aware that turkeys are very profitable, and it's my opinion that turkeys pay better than any other fowl on the farm. They have no equal as scavengers. If you wish your place cleaned of insects, worms, etc., they can do it neatly and quickly which is a saving to crops, and is profitable in the way of developing the turkeys in the best possible manner. The selfishness that dwells in the hearts of some people is a detriment to them when it comes to making a howl because his neighbor's turkeys happen to cross his farm occasionally. I have never yet discovered any damage done by turkeys ranging on our farm and I have seen quite a number of youngsters grown on our farm. They will not eat enough grain to fatten a fly during "grasshopper season." The majority of people enjoy the custom of granting favors and will not object to the neighbor's turkeys ranging on their farms, but occasionally one will. You can easily read the individual's character when he brings up a "howl" because he finds somebody's turkeys on his place. This sort of character is as a rule, classed with the egg-swapping class. Some people in our land are so selfish, or so stingy, or so dishonest—I really can't say just which phrase is the better; but I rather think as a rule such people can digest the whole mess and live, because they have the nerve to set around and wait until you send off and buy a nice trio, pen, or a setting of eggs of pure bred chickens or turkeys, and as soon as they discover you have some real fancy fowls, they come over some afternoon just to see if they might "swap a few settings of eggs with you." The breeder that is soft enough to be gobbled up after this manner should be sent to the insane hospital or some other miserable institution. The party that has the ambition to invest in pure-bred fowls should not be imposed upon in such a manner. It's no imposition for turkeys to roam over your pastures, they are a benefit to the farmer who should encourage the breeding of turkeys as well as all varieties of pure bred fowls.

It is true that poults require some more attention while young than chicks, but they will not require half the amount of feed. The greatest mistake some turkey growers make is in trying to economize by buying or using only small inferior stock to breed from. No one can expect to do much in the turkey business by using small inferior specimens just

because they can be had for less money. I am convinced that nine out of ten cases of "black head" reported to me recently can be traced directly to inbreeding or using run-down, inferior stock. A farmer of our acquaintance this season bought two pullets of our strain and would not accept anything but the very smallest late hatched specimens in the flock. It's right to the opposite with myself, I breed from the best or not at all. I am using this year a 1909 hatched tom that weighed 35 pounds the first day of February, not fat, only in ordinary flesh, yet some of those so-called conservative fellows will say, "why don't you sell that big fellow; he'll bring a big price now." But I find the best is none too good, and hard to get, hence, I prefer something above the ordinary and will not accept any other. If you wish to make money out of anything do your best to have the *best*. If you have a better strain than your neighbor I guarantee you will enjoy the best business. One of our neighbors has a reputation of keeping only the best mules that can be found, hence he sells his mules for almost twice as much as any one else in the neighborhood. Only a few days ago he sold a pair of mare mules for a long price to a man from a distance, just because his name is spreading all over the land as an expert mule man. Same is true of the turkey business. If you will insist on having only the very best money will buy, the demand will increase for your stuff. I shipped a tom to New York recently and my customer was so well pleased he wrote me for another, but sorry to say I was out. I might add that this same party bought a tom of me three years ago, and says the bird now weighs fifty pounds. It's the best that sells and not the small, inferior birds.

You will find turkeys the easiest to handle of any fowl. I feed my poults the least of any fowl I ever raised, in fact they will do best on but little artificial foods. They are self-supporting and will make their own way, and transform the weed seeds, bugs, worms, etc., (that destroy thousands of dollars each year for the farmers) into good money. Give your poults free range and but little food and you will raise the majority you hatch. Of course you will have to use good judgment about feeding. If they have free range, they will require but little feed; but if the range is limited, you will be compelled to feed more. In any event, raise turkeys, if you are on the farm, and raise only the best.—J. C. CLIPP, Saltillo, Ind.

MARKET NOTES.

To get the highest prices your eggs must be known to be of the best quality. When the common run of eggs are selling in stores at 20 cents a dozen, in the large cities, guaranteed fresh eggs are selling to special customers at 50 cents.

Careless methods of producing and collecting eggs on the farm are responsible for many defects in quality and consequently lower price.

When the weather is warm, eggs for market should be gathered twice a day and kept in a cool place. It is important to get them sold and into the consumer's hands as soon as possible, especially if they are fertile.

Use all cracked, dirty and small eggs at home. They are all right for this purpose but lower the price of your consignment in the market.

Never allow moisture in contact with the egg, and keep it away from musty cellars and bad odors if you want to bring a good price and reflect credit upon the seller.

POULTRY PICKINGS

It goes without saying that every farmer should keep enough poultry to supply his own needs. Further than that it depends upon his convenience to market.

Lice is one of the worst troubles in the poultry business. Every poultryman will tell you this. Use insect powder freely, but cleanliness must be maintained at the same time.

Too much shade is not good for poultry, but some is always necessary during the hot summer months. Low shrubbery or something like a plum thicket affords an excellent retreat.

Don't locate your poultry on wet clay soil or pure sand. Sandy loam well provided with humus is best. It must produce grass for green food and be sufficiently porous for good drainage.

While not building your poultry house in the woods, the latter is an excellent scratching ground for your birds if situated conveniently near. It gives them much protein food in the form of bugs and worms.

If possible have your poultry yard slope to the south, and don't locate it in the woods where there is too much shade and dampness and where droppings can not be used to advantage in the production of green food.

USE FOR BROKEN DISHES

During the first seven years I kept house it was a question what to do with the broken things, as I all the time feared I might put them where something would suffer from my thoughtlessness. The first three years I lived on a farm where there was plenty of gravel to furnish grit for the fowls, they were fat and healthy, and we got plenty of eggs, with but little exertion on my part.

I then moved to this farm, where there is no gravel, and in spite of all my efforts my fowls were poor, frequently dying, though there was no cause for it that I could see. Their gizzards were found to be soft and void of fat. We got scarcely any eggs. I was sure it was for the want of grit and frequently crushed brick and scattered in their run.

The idea came to me last fall to crush my broken dishes and all such articles for the fowls. Knowing wheat to be excellent food for them, I mixed the grit with wheat bran, and fed the hens every evening; it was but a few days till they were laying and all looked thrifty.

I soon had eggs with which to replace the broken things and buy many more. The gizzards are now firm and covered with fat, and there is no more worry over barefoot children and stock getting hurt on broken lamp chimneys, bottles, etc. Readers who are interested in poultry and have barefoot children and stock should try this plan and they will be charmed with the result.—*Exchange*.

Poor success with poultry on the farm comes from poor management, but this does not signify that every farmer has to become an expert fancier. A medium ground is all right.

Immediately after dressing poultry, it should be thrown into ice cold water, and allowed to remain there until all the animal heat has left the body. Neglect to do this is very apt to have the carcasses turn green in parts, by the time they reach destination.

Chicken should never be eaten the day it is killed. The tenderest fresh killed chicken will be tough as soon as the animal heat has left the body. In about twelve hours, however, the muscles will relax, and it then becomes acceptable for food.

Experiments have proved that a hen in good condition will eat, on an average, three ounces of mash in the morning, two ounces of grain at noon, and four ounces of grain at night.

FARM NOTES

Don't forget to make your hens work for all they eat. Exercise keeps them healthy and vigorous. The scratching hen is the laying hen.

Let your fowls to green food in the morning. That is the time they like to have it. Did you never notice how zealously they pasture on the bluegrass around the house at every opportunity.

If you are in the poultry business right, it is not too early to begin planning for your breeding pens for the next season. Yard space and runs should also be considered.

You should think of quality rather than quantity. Nearly anybody can hatch out a promiscuous lot of chickens. To have such as will sell for good money is "a horse of another color."

There is still a chance to get rid of those fat old hens that have abandoned the laying habit. Put them on the market at a good price just before Christmas.

Don't you think turkeys would pay you? Suppose you try a trio anyway. If you do they ought to be purchased very soon, so they will settle down and feel at home before the laying season opens.

Corn, barley and buckwheat are very fattening grains, the latter having a tendency to whiten the flesh. Sweet potatoes are sugary, and as such are fattening, but give a yellow tinge to the flesh.

TO SUCCEED WITH FARM POULTRY

Keep none but pure-bred fowls. Then their eggs will sell for either fancy or commercial purposes. Get as good stock to begin with as you can afford.

Make egg production your prime object and work in other features as demand arises. The greatest demand is for eggs, especially during the winter and early spring.

Sell only fresh and clean eggs and sort them according to size and color. This is the way to please your customer and save the middleman's profits. Cut off all customers at once who do not give your price and pay promptly.

Of course you will have some fowls for sale. Some broilers, perhaps also some old hens for the fall market, and cockerels in the spring for breeding or for general market.

Trios of breeding stock may also be sold when the demand in that line justifies and a surplus has accumulated.

In marketing, everything must be in first class condition and calculated to render perfect satisfaction to the customer.

What did I say? Why, I said nothing. Quit talking and go to work if you want to succeed in the poultry business.

Fernent talking, all I've got to say is that there's too much of that sort of business going on in the world. What I like is to get down to silent work where every lick counts.

The crowing hen is one that I set no stakes on. Every time, I take the one that sits silent and still on her nest all day long. She brings off the most chicks in the end.

With Thanksgiving over, the next thing is to be ready for Christmas. Give the old gobbler more corn, and get those young turkeys fat and ready for the spit without delay.

No, you don't want a nervous, fussy hen. She will break more eggs and trample more chicks to death than she ever was, or ever will be, worth at any time.

Instead of a "little lamb" they now say it was a little hen that Mary had, and I am told that it not only kept the wolf from the door but also lifted the mortgage from the farm!

ABOUT VIGOR IN FOWLS

What a hen gains in abnormal productiveness she and her progeny must generally pay for with a loss in constitutional vigor.

So much more is now demanded of our poultry that a loss of vitality in offspring necessarily ensues unless the mating of strong individuals is closely attended to.

Building up a strain of poultry is not the work of a day or a year, but of many years. To do anything worth while, takes time.

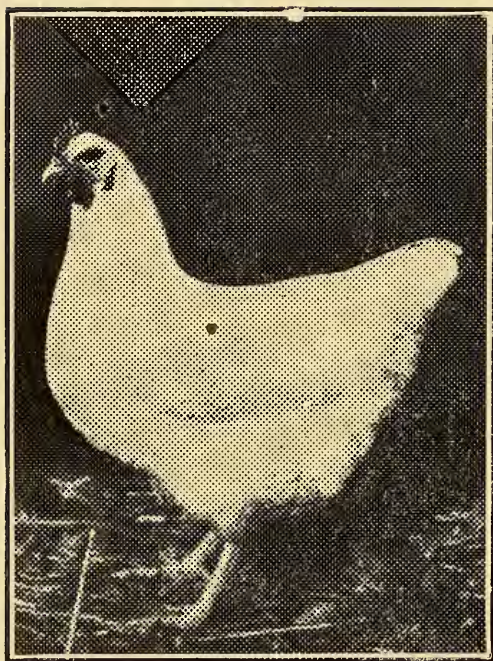
For a hen to sing and a cock to show gallantry and generosity towards the opposite sex, are sure signs of constitutional vigor.

Any specimens of a flock that show weakness should be carefully eliminated from the breeding pens. All breeders should be vigorous.

Fowls lacking in physical vigor are slow about coming



WHITE PLYMOUTH ROCK COCKEREL.
Walter M. Rogers, Ocellia, Ga.



WHITE ROCK PULLET
Walter M. Rogers, Ocilla, Ga.

from the roost and among the first to return, besides being inactive and "dopy" during the day.

Lack of constitutional vigor is seen in slender body and slim neck, legs, bill, and other features. The vigorous head is short and broad.

Somebody called the hen an egg machine. This is not correct. A machine has no choice but a hen has. The number of eggs she lays depends upon her will.

You ask for proof? Well, leave all the eggs a hen lays in her nest and when the number reaches 12 or 15, your hen will become broody and quit laying. Would a machine do that?

No is that all. If you take a laying hen and place her in a new yard she will stop laying, no matter how many eggs are under way in the ovary.

No matter how well fed the hen is, or how many eggs are in process of production in the ovary, if anything occurs to discompose her mental serenity, she stops the laying process.

So if you want to get plenty of eggs from a hen you must work on her susceptibilities as well as furnish food and care, for the hen is not an insensate machine.

There were big laying hens nearly 2000 years ago Pliny tells us in his Natural History that some hens then laid an egg a day, and others even two eggs a day. Some were so prolific as to die from exhaustion.

Pliny also observed that pullets laid more eggs than older hens though their eggs were smaller. Though hens laid as rapidly then as now, they seem not to have continued so long, for sixty eggs seem to have been the limit for one season.

In more recent times Buffon claimed that a hen would, under favorable circumstances, lay one hundred and fifty eggs in a year, besides bringing up two broods of chickens.

ABOUT DUCKS

Why don't farmers raise more ducks? They make a dish scarcely second to turkey, and they are quickly raised.

A sufficiency of water is necessary for ducks, but no

large ponds or streams. Most of the country is sufficiently watered for ducks.

Don't feed whole grain to ducks and especially whole corn. They must have meat scraps or something to take its place. On the range it is insects, worms, and water life.

Young ducks should have from four to six per cent of sand in their mash for the sake of digestion. Without it they cannot thrive if kept in confinement.

Ducks are but little troubled with disease. This is another great point in their favor. While other fowls die they grow right on in vigorous health.

In raising ducks, choose a breed to fit the purpose you have in view. Indian Runner ducks should be chosen for layers. They have been called the *Leghorns* of the duck family.

Put your setting hens in a coop or house to themselves where other fowls cannot disturb them. Water them and feed them regularly and dust them with insect powder twice a week and then let them be. Don't always be fussing with setting hens if you want them to do good work.

Set four or five hens at once so that the work can be more uniform. In five to seven days test out all eggs that are not fertile and re-arrange the rest. You may have one hen to spare for new work. In 21 days—but pshaw! I haven't time to tell you everything. Go and learn something by yourself.

Some say "don't count your chicken before they're hatched," but I say count 'em, or, what is the same thing, put none but fertile eggs under the hen or in the incubator and have them incubated right. If you do that you can count 'em before they are hatched without fail.

I don't use machinery to hatch my chickens, but others can do so if they want to. I suppose the machine will hatch them all right if you keep things in proper order, but that is where the trouble comes in—keeping things in order. So I leave all that to the hen who knows more about the business than I do.

After you have your eggs all right, select a quiet, medium-sized hen to do the hatching. She won't romp around and break her eggs or get excited at hatching time and crush her young chicks to death. A self composed hen like a self composed woman, is a treasure worth having.

RAISING PURE BRED POULTRY

THE EXCUSES some people give for not raising pure bred poultry are many and are quite interesting. Some say "I only raise chickens for my own use, the common kind does just as well." There is no bigger mistake. Pure bred chickens of the American breeds require no more care, are no harder to hatch, and grow off so much faster than the common kind that this fact alone should convince anyone that pure birds are best. And the pure bred birds are beautiful in shape and color, besides the extra weight and choicest meat, should prompt all to raise the pure bred birds even for their own table.

Another excuse we hear: "Oh! I only keep chickens for eggs to sell and the common kinds are the best layers." Now, nothing could be farther from correct than such a statement. If I were raising chickens to supply eggs for market I would not hesitate to raise one of the Leghorns. For eggs alone they are the bird, but for general purposes nothing equals the Barred Plymouth Rocks.

Others exclaim: "Oh! There is no money in chickens anyway!" Well perhaps not, *to that class*, but to the American people there is about fifty millions more a year than there is in "King Cotton." And why? Because the thrifty poultrymen of the United States are constantly improving their stock and increasing their profits.

Some will tell you: "You can get just as much for common eggs as you can for fine ones." Perhaps so at the country store, but how about the many settings you could sell to your neighbors at \$1.00 to \$1.50 per 15. Breed pure birds and you will be surprised at the number of settings you will sell right around home without spending a cent for advertising. When I started with pure Barred Plymouth Rocks five years ago, it was for my own pleasure, and the sales to my neighbors is what prompted me to still further improve my strain and advertise in *THE INDUSTRIOUS HEN*. So you see that pure birds open the way to a profitable business.

Some will tell you: "I would raise pure birds if I were only fixed up for it." Now, the pure birds are as healthy and vigorous as the common ones, so the present "hen house" if cleaned out and white-washed will do alright for pure birds and will pay well. I have had people tell me "if I was only fixed up like you, I would raise pure chickens too," when really they were better located for chicken raising than I was. *The trouble is that people believe that to raise*

pure birds they must have expensive houses. I think this idea came from reading Northern poultry journals. Down South expensive houses are not required, in fact the birds do not do so well in them as they do in the cheap affairs we use. Why, during summer an open shed with a few poles for roosts would do for a "hen-house" and the fowls would be healthy and happy. Of course, during winter three sides of the shed would have to be walled up, but that would be a very inexpensive item.

Then this one: "Pure chickens require too much attention." Yes, they do require fresh water, clean houses and a reasonable amount of feed, but they pay a mighty good profit on the time and money required. The lazy man should learn that the poultry business is a good one to stay out of, for it requires work, brains and money to carry on any business, and this is especially true when it comes to poultry.

Farmers tell us: "I would like to raise thoroughbred poultry but it would require too much money to start right." While one can't expect to start with poultry with one setting and make a success, it is equally true that one can start large and make a failure. To start on a large scale without a clear understanding of the business is folly and means failure from the start. But one can start small, keep going, read good poultry journals, study his breed (by reading the Standard), cull closely, and in a few years have a stock and an understanding that will produce business. If I had common stock and wanted to change to pure breeds, I would buy eggs for hatching and I'd set every old hen that wanted to set. If during the season fifty wanted to set I would buy fifty settings. Then when my young stock grew to maturity I would have a "grand clearance sale" of common fowls. One year would give you a fine start in pure bred poultry. A few will say: "I tried pure bred poultry last year but it didn't pay. Why, I ordered a setting from _____ who charged me a high price (generally about \$1.00 per 15) and I only raised three chickens. No, it didn't pay." Now if you question this part closely you will find that he hatched out 12 to 15 chicks from that setting, but from pure carelessness he only raised three. Yes, this is the class that say that pure poultry don't pay and there are others but—what's the use

GREEN FOOD FOR WINTER USE

As a rule, we grow enough cabbage to supply our chickens with sufficient "greens" through the winter months:

but in case this crop is a failure, we like to have "something just as good" to take its place. Besides, the other fowls need something green, and we have noticed that they do not seem to care much for cabbage. However, there is nothing that is quite so convenient, especially when hens are kept in limited quarters.

The best way to feed cabbage is to strip off the outer leaves and hang up the heads against the wall. The stalks, of course, are left intact when the cabbage are gathered; likewise the leaves. When properly buried they will keep fresher than when placed in the cellar.

The best green food for both geese and ducks in winter is green rye. It may be kept green and fresh by being cut when in frozen condition and stored in a cool, dark place, where it will remain for some time without spoiling.

Young rye is better for all kinds of poultry than dry clover. Without being steamed or scalded, cut clover or alfalfa is hard for the fowls to digest and even when scalded it is not as easily digested as green rye. Of course, it is not necessary to store the rye as described above. It is better to let the fowls "harvest" it themselves when the ground is not covered with snow.

The rye should be sown rather early, so it will get a good start before the hard freezing sets in. The soil should be very rich and finely pulverized. Sow the rye broadcast or drill both ways, so that it will nearly cover the ground. Keep the fowls off it until it gets a start.

It sometimes happens that a substitute for green food must be found, in which case raw vegetables, such as potatoes, turnips, rutabagas, etc., answer very well. Apples are always relished. Even pumpkins are not refused. Cut the pumpkins in halves, remove the seeds and the hens will do the rest.

Speaking of pumpkins, when properly cooked they make a very good basis for a mash. Don't let any pumpkins go to waste this fall.—ANNA GALLIHER, in *Successful Poultry Journal*.

SOME USEFUL HINTS FOR POULTRYMEN

You can tear down in a day what it has taken several years to build up. So don't take up with all new methods, theories, etc., that you happen to hear of. When you do undertake to improve by them, go at it by degrees. Take

one or two fowls and experiment. Then, if you find that such methods are practical, apply them to your flock.

There are many "has beens" who have blighted their success by pellmell applications of what some one has tried to help them with.

Don't put a sick fowl in a coop with healthy ones, it matters not how slight, or what the disease may be. Read that again, comply with it and save your self much time and money.

Nothing will show neglect on your part quicker than will the condition of your fowls. Their appearance tells the tale to your friends and callers.

Don't read your poultry journals for pastime, but for what there really is in them. Profit by what you read and hear, provided you like it.

One quart of water, to which has been added one-quarter pound of capperas and a tablespoonful of sulphuric acid—one teaspoonful of this to a gallon of drinking water makes a good tonic to build up a run down flock.

Sulphur burnt in your poultry-house will kill lice and mites, and at the same time destroy disease germs. It also destroys odor expelled from sour dropping boards.

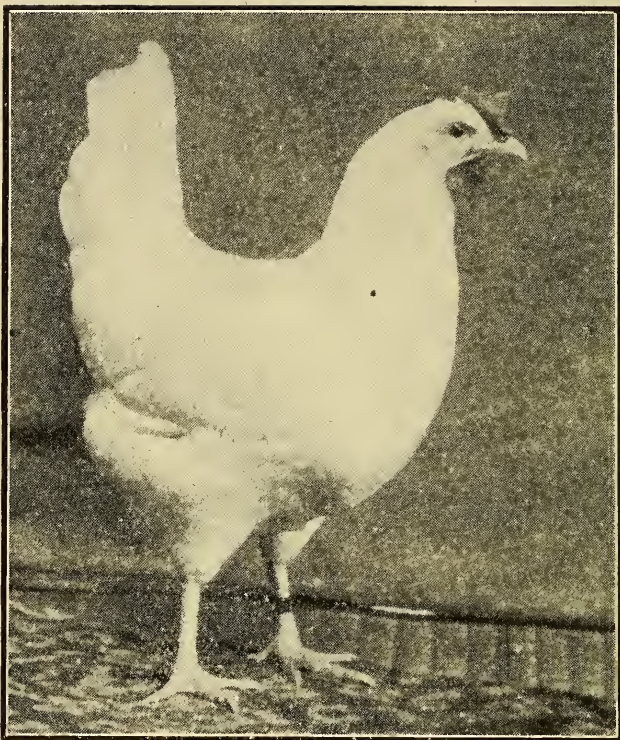
Twenty drops of carbolic acid to a gallon of drinking water will correct most bowel troubles.—J. A. THORNHILL, Hartselle, Ala.

POULTRY FOR BOYS AND GIRLS

Boys and girls on the farm should be taught practical business from earliest years up. In no line can these business habits be better acquired than in the production and marketing of poultry. Give the small boy one or two hens to look after and as his years and skill advance increase his flock or rather allow him to do so from his own raising. The sister may be allowed a similar privilege, or she may work in partnership with her brother. Each may find certain features of the work more congenial and thus divide on that line. If they show aptitude they may in time be allowed to take in charge the whole poultry plant of the farm with the agreement that the family table shall be supplied free of charge with so many eggs and so many fowls per week, during the season, and the rest to be marketed for personal profits and as pay for work and management. Of course any modification of this plan that seems



WHITE LEGHORN COCKEREL
J. F. Childress, Sweetwater, Tenn.



S. C. WHITE LEGHORN PULLET
Clayton I. Ballard, Morristown, Tenn.

advisable under the circumstances may be adopted. The great point is to teach the young folks thrift and business habits and at the same time secure efficient care of the farm poultry.

NEW BLOOD

The mistaken ideas about introducing new blood into a flock of poultry are something truly wonderful. The popular notion is that one must every year get a new rooster no matter of what breed, to keep the stock from "running out," when this is the very thing to make it run out. Proper mating and selection for vigor in the same line and breed is what builds up a strain. It gives fewer conflicts of hereditary traits; fewer introductions of undesirable tendencies, and a greater percentage of good ones.

THE DESPISED HEN

In old days the hen was little thought of on our finest Southern plantations. Poultry was kept by sufferance or relegated to some poor white family or crippled slave. It was not thought quite the thing to sell eggs and fowls to customers in the city. But things have changed and the once despised hen has come into her own heritage of favor. She is no longer a scratching nuisance on the farm, but a great money-getter. The eggs and poultry now shipped out of Tennessee mount up into the millions of dollars every year. This is especially true of the Appalachian region where the country is thickly populated and cut into small farms. In some sections the eggs bring more than the wheat. Poultry is also becoming a striking feature of the old plantation. The hen now stands in as high favor as she was once depreciated. Beautiful flocks of pure bred fowls are now the planter's greatest pride, and every fall and winter they find their way to the various poultry shows and carry off the medals too. Verily the despised hen is coming into her own true heritage

FIGURES ABOUT EGGS

Every year but one (1900) since records have been kept, the hens of this country have distanced the gold mines in the value of their output, and the hen will be climbing into billions when the gold mines give out.

Iowa is the banner state for eggs. About one million

dozen eggs are laid every year within her borders. In 1905 Kansas and Missouri realized from their egg crops nearly fifty million dollars.

Our last census showed more than 233,598,005 hens of laying age in this country. They laid enough eggs every year to give 203 to every man, woman and child in the United States.

In later years the increase has been very wonderful. One authority states that this country last year produced one and a quarter billion dozens of eggs!

More than one and a half billion eggs reached New York City from interior states in 1906, besides other millions from nearby territory. For one thousand miles the freight on eggs to New York City is only one cent each.

POULTRY POINTERS

Sell your discarded hens as soon as they quit laying. The price is generally as good then as at Thanksgiving or Christmas and the cost of feed is saved.

Some poultrymen pick the feathers from their hens at the beginning of the moulting season and feed lightly. As soon as the feathers grow again the hens begin to lay and continue all fall and winter.

Why not have a poultry show in connection with poultry lectures in the winter short course at our state agricultural colleges? The two features would be mutually helpful.

Turpentine is good for gapes. Mix a teaspoonful of it with a quart of wheat and then administer a tablespoonful of the grain to each fowl.

The one great mistake of the farmer is mixing his breeds. The different breeds have different natures and purposes, which require different feed and treatment and these clash when brought together in the same fowl.

We often see the assertion that it is foolishness for a person to bother his head about the analysis of the food fed to poultry. This I admit to a certain extent, but I do think it time and money well spent to know something about foods—what they are being fed for, and how much we should expect of them. It is a fact, and we all know it, that certain foods, if fed alone will not produce eggs. It is the

same as regards meat production. Then how must we remedy the difficulty? By knowing what to feed, how, and when to feed, and to do this, we must be somewhat familiar with the general analysis of the foods being fed.

We find that the analysis of an egg is about as follows: protein, 11.5; ash, 12.3, and fat 8.9. We also find that the entire analysis of a hen's body that is moderately fat is as follows: protein, 21.6; ash, 3.8, and fat 17.2. Now to properly feed our poultry it is well to acquaint ourselves a little as to the analysis of our general grain and other foods. We have often heard it said, don't feed too much corn, as it is too fattening, etc. This is true, but let's find the corn analysis and compare it to that of the hen's body and the egg she is expected to lay. Corn contains: protein, 7.1; ash, 1.5, and fat, 3.9. Does this prove to us that corn isn't a grain to rely on for eggs and a food to retain the hen's general body? We admit that the carbonaceous matter in corn is about 63.4, hence should be avoided for this reason during hot weather, for hens; but for growing chicks nothing will surpass it for general tissue-building. We have had the question asked: "Is there any difference in the food value of white and yellow corn?" The analyses are the same, but after experimenting with the two several different times at different seasons of the year, with chicks and old fowls, the writer has concluded that yellow corn has the advantage. One thing in its favor is, it contains more digestible sugar than does white corn. Again we find it transmits a richer color to the egg as well as that of the meat.

Wheat, oats and corn make the best grain food, while wheat bran, corn meal, wheat middlings, linseed meal, oat meal, alfalfa meal, buckwheat meal and clover hay meal make up our mash food; and meat scraps, dried blood, milk, green bones and slugs of raw meat, make up our animal foods for poultry. If we are feeding for eggs, our aim should be "a variety," and to get this, we only have to mix these grains and their by products as named above. To get the animal food, we need not use but one, that is, if it is fresh and of good quality.

My plan is, 200 pounds of wheat, 150 pounds of oats and 100 pounds of cracked corn for grain food. Sunflower seed and kaffir corn are fed occasionally. For mash I use 100 pounds of bran, 50 pounds of corn meal, 50 pounds of middlings, 50 pounds of oat meal, 50 pounds of alfalfa meal, 20 pounds of cotton seed meal; and for animal food anything that is fresh and good.

POULTRY TERMS

Every person who keeps poultry should at once learn the use of poultry terms. A pullet, for instance is a female bird less than a year old, while a cockerel is a male bird less than a year old.

Professionals designate a male bird over one year old as a cock, though on the farm we often say rooster. The female bird of like age is of course called a hen.

The young of a hen is called a chick until its sex can be distinguished, or possibly even till one year old. A brood is a collection of chicks cared for by one hen or in a single brooder.

Thirteen properly constitutes a setting of eggs, though many poultrymen now sell fifteen for a setting.

A bird weighing two pounds or less, and from six to twelve weeks old, is called a broiler. When it weighs over two pounds it is called a spring chicken.

A stewing chicken weighs about three pounds, and a rooster four pounds or more.

A male bird deprived of its generative organs to improve its flesh and weight is called a capon. A pullet similarly treated is called a poulard.

One male and two females constitute a trio. A breeding pen consists of a male and six to fourteen females.

A male goose is called a gander, a male duck a drake, and a male turkey a tom. A turkey in its first year is a poult.

LITTLE SUSIE'S LETTER

I am a wee bit of a girl and live on the farm. Papa raises horses and cattle, and I raise little chickens and sometimes have eggs to sell.

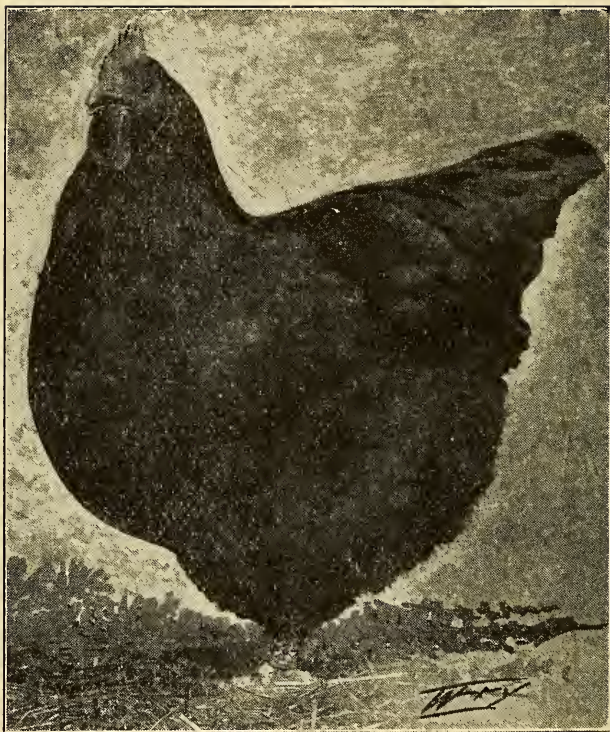
Papa gave me two little Bantam hens and a Bantam rooster and that is how I got into the chicken business. He says he thinks little girls ought to have something to do that is useful.

I feed my chickens cracked corn and oats and a few scraps from the table. They also pick bluegrass in the yard. My little rooster finds worms and bugs which he feeds to his wives, for he is so gallant that he rarely ever eats one himself.

Last spring my little hens began to lay eggs and they were just as cute as could be. When they got a nest full, each hen went to "sitting" and the little rooster stood about in a very lonely way.



BLUE ANDALUSIAN COCKEREL
V. H. Council, Warrenton, Va.



BLACK ORPINGTON HEN
W. F. Fry, Birmingham, Ala.

In about three weeks each nest was full of little bunches of the softest down you ever felt. When the little rooster came around that morning to see how everything was going on, he heard several small voices going "cheap, cheap," and then he knew he was "papa," too, and seemed to be very happy.

I didn't feed my young chicks for about two days. Papa said that was the way to do. We put them with their mothers into dry coops with coarse sand scattered on the floor. The chicks picked this sand and it helped to use up the mother food which they got in the eggs and get them ready for their first meal.

Their first dinner was dry bread-crumbs and a little coarse oatmeal. That evening that little "papa" rooster called all his wee children out of their coops and hovered them nicely. It made a big wing full for little heads were peeping out on both sides.—SUSIE.

INCUBATOR TALK BY UNCLE HENRY

Some say incubators won't do but I say they will if you've got sense and ar'nt too lazy to run 'em. Come to think of it, a spry man is necessary to do the work of a hen correctly.

One reason I prefer the incubator is that you don't have to wait till it lays out a clutch of eggs and gets broody. The incubator is always broody and you don't have to put it in a coop or souse it in a tub of water to break the broody spell when there are no eggs for it to get on.

Again the incubator can cover more eggs than a hen. A hen may cover 15 eggs, but an incubator will cover 1500 if you get it large enough. And you may have it small enough to cover only 50 or 25 eggs. A hen does not admit of such handy expansion or contraction.

Chicks can be reared more rapidly when there is no hen around to bother. Also they can be brooded in larger lots so as to reduce the expense. Incubator chicks are not born with lice on them, and if they have any it will be your fault and not the incubator's.

Incubators "sit" right where we put them. They don't break eggs or throw them out of the nest. Nor do they tramp on and kill their chicks after they hatch them. The incubator never gets cranky and self-willed or drabbles its brood as biddy does, and its chicks are gentler and more easily handled. Give me an incubator every time.

GREEN FOOD

Fowls must have green food at all times, winter as well as summer. In the middle South bluegrass generally furnishes green food in winter, and other grasses may serve farther South. In the North where snow sheets off the pasturage, cabbage and beets are a good substitute; also clover, hay and alfalfa may be cut fine and then steamed and fed in the mash. The hay may be fed dry, but not so successfully. Experiments have shown the great importance of green food in egg production. A liberal supply, it is said, will bring two dozen more eggs to the hen each year than if the supply is scant.

WINTER LAYING

Are your winter layers ready? Eggs will be high this winter. With proper care some of your hens may turn out more profits during the winter months than during all the rest of the year. Make the conditions as spring-like as you can and feed plenty of proteids. Wonder some fellow doesn't invent a poultry greenhouse with beds of growing grass and sprouting grain. The ventilation could be made perfect, and the warmth so spring-like, and the grass and growing grain so green that biddy would think May days had come and lay "fit to kill."

THINGS TO REMEMBER

Ashes help to keep away lice. Scatter them all over the roosts and inside of the poultry house. Whirl the ashes through the air and let them settle over everything, but be careful that there is no fire in them.

When you buy new chickens keep them confined for two or three weeks in a place remote from your old fowls so disease will have time to show if they are infected with it. This precaution may save your flock and a great deal of trouble besides.

If you value the health of your fowls, don't feed them in filthy vessels nor fail to give them pure, fresh water every day. Scald out all vessels frequently and spread lime on all floors and grounds where the birds use.

Poultry is not fit to eat till about twelve hours after it is killed. At first it is tough, but if left in an icebox

or other cool place over night, it will part with its animal heat and become tender.

It is important to study the methods of wild animals that kill poultry so that you may indentify and secure them. The mink or weasel cuts the veins of the neck and sucks the blood, killing a dozen or more fowls in one night. The opossum kills only one or two at a time and eats off the head and neck.

Sell at once every hen that does not pay for her keep by laying eggs. It does not pay to keep drones and you should know it. Yet every farmer is guilty of this offense. There are on farms today thousands of hens that "do not earn their salt."

BUY STOCK NOW

The fall or early winter is the best time to buy new stock. If the yards happen to be crowded as winter comes on, the breeder will be glad to part with some of his year-old stock at some reduction. He will want more for them after feeding all winter. So take time by the forelock and buy before the spring rush comes. It is best to get new stock settled down and at home before the breeding season comes on. The nervous excitement of shipping lowers their vitality which it takes some time to get over.

NOTES ON GUINEAS

Every farm should have a flock of guineas. This bird is both ornamental and useful. With the disappearance of game birds, there is a growing call among epicures of the great cities for guineas whose flesh has the texture, color, and flavor of game birds.

The guinea fowl came originally from Africa, and was known even to the ancient Romans. However, their guineas probably came from eastern Africa, while ours came from the west coast where it is found today in large numbers.

Guineas require but little care on the farm where they range widely and pick up their own food in the form of insects, seeds, and green stuffs. They gather buds and berries, and in winter, such grain as may be found in cultivated fields. They originally mated in pairs but now several hens are allowed to one cock. Yet too many hens will cause the eggs to be wanting in fertility. If allowed to range in the laying season several hens lay in the same nest.

This fowl is inclined to be wild and secretive, especially

during the nesting period, the place of their nest being hard to find. The hens are bad setters and poor mothers; hence their eggs are generally given to a common hen for incubation.

The 200-egg hen is rarely a hen at all. She is a pullet, or at least a hen in her first laying year.

Chickens must have shade to protect them from the hot sun of fall and summer. A thicket of plumb trees makes one of the best shades.

If possible build you poultry house on a well-drained southern slope. There should be no dampness about the house or yard, for that will tend to produce disease.

Your drinking fountains should be furnished with pure, clear water each day. Nothing is more apt to communicate disease than impure water.

The poultry house should face the south with a wide opening above so floods of sunlight may enter and destroy the germs of disease.

For winter eggs, have pullets or first year hens. Unless eggs are needed for hatching allow no males in the pens. Feed with a mixture of ground grain and meat.

Remember that eggs for market pay best in winter and that is the time for greatest care and zealous work in getting most out of the business.

Keep the chicks out of wet grass. In fact they should not be allowed to run in any grass, unless it is clipped very short, until they get large and strong.

It is important to set none but fertile eggs. You will find it a dead loss to have a hen spend the incubation period wrestling with eggs that won't hatch.

If you get any profit out of chickens you must control disease and keep the birds healthy. The great drawback to the business is the loss of so many chicks by disease.

In the South we once called cotton our king. With equally good reason the hen should be our queen.

The protein in animal food has been found much better for egg production than the protein in vegetable food.

Soda fountains and first class hotels in large cities are among those who pay highest prices for eggs, and they are often obtained directly from the egg-farms where their freshness and good quality can not be questioned.

AN EGG PRESERVATIVE

For those who would avail themselves of an opportunity to put away their eggs, during the time when there isn't much demand and the price low, until a better season for selling, I will offer a formula that will not fail, one that has been tried in our family for many years to our entire satisfaction. The eggs are taken out just as fresh as the day they were put into the liquid, it matters not how long they are allowed to remain there:

To six gallons of fresh water, add one quart of newly slacked lime, one and one half pints of fresh table salt; mix this thoroughly and add about ten ounces of cream of tartar. Mix again, after which, put the preservative into a barrel or large tub. It is now ready for your eggs. Put nothing but fresh ones into the preservative, for one bad egg will spoil the whole lot if allowed to remain too long. To deposit the eggs into the fluid, use a large cook-spoon, plate or the like. Avoid cracking them. An egg that is cracked or soiled shouldn't be used. Should you find the amount of fluid mentioned to be inadequate, you can mix a larger amount by using the above proportions.

As you add fresh eggs, the preservative should be tested. The method used is to take a fresh egg and if it sinks, the brine isn't strong enough; but if it remains near the surface it is about right.

To keep all eggs under the water, put a top—cut the size of whatever is being used—over them and place a large rock on top of this. All eggs must be kept under the preservative, or they will begin to decay. On this board put a handful of salt and lime, which will keep the fluid the same strength from bottom to top. Add salt and lime as the preservative weakens, being sure that the brine will hold up a fresh egg at all times. It is best to put those of different color and size into separate receptacles.

After the tub or barrel is full, cover and let it remain for thirty days, after which examine the preservative. If not strong enough add salt and lime; but if it is, cover and let stand for another thirty days. After the third trial, the eggs should be all right and should keep fresh for years.—J. A. THORNHILL, Hartselle, Ala.

Success with poultry is in the man and in the hen and in the feed and in a lot of other things too tedious to mention, but not too many for the right man to master if he wills to do so.

WHAT UNCLE HENRY THINKS ABOUT IT

Some one has said there is no profit in lice. That is true. Better kill the lice and trust to getting profit out of your hens. You can't run both successfully at the same time.

Don't put different kinds of eggs in the incubator at the same run. They will hatch out at different periods and bother you. Keep the hen's eggs to themselves and put the goose eggs in at another time.

Think what an egg is made up of. Its matter, or contents, are largely liquid. Hence the hen cannot do without water and do much business in the line of laying eggs. Give her plenty of pure water if you want her to give you plenty of eggs.

We are told to put our roosting poles near the ground, but there is doubt about it. It is true that fat hens can get down from the low roost without danger of shock, but fowls always feel safer from dogs and vermin on a high roosting pole.

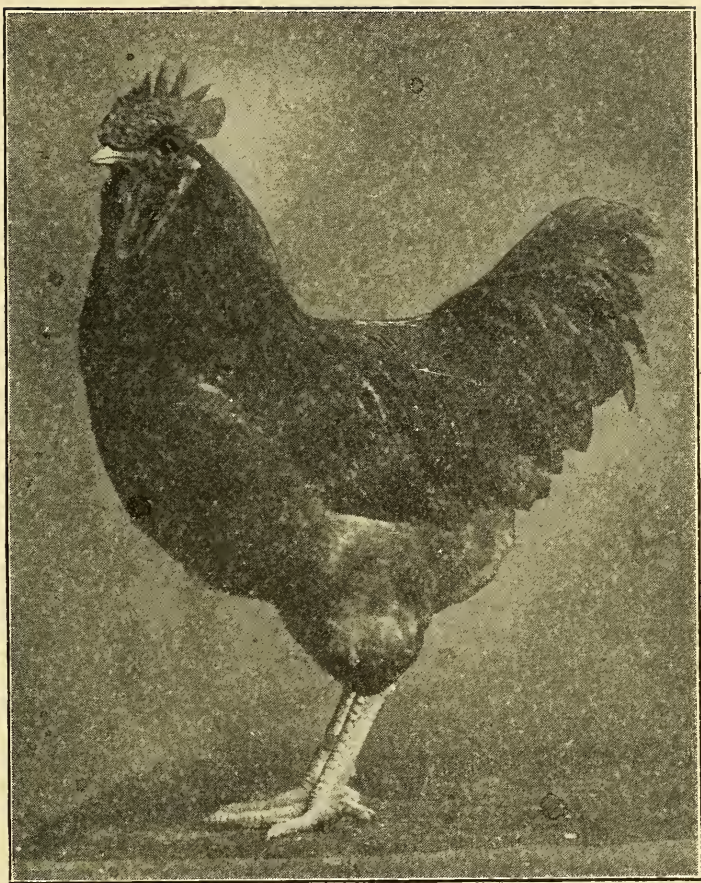
It is bad policy to feed hens nothing but corn all the time. They want variety just the same as you do. If they can't get it by foraging, you must supply it to them in wheat, oats, cabbage and meat scrap.

By all means keep your coops and houses clean. Filth is a breeder of disease. It encourages lice and mites and reduces the vigor of your birds. Filth and health do not harmonize in the same incubator.

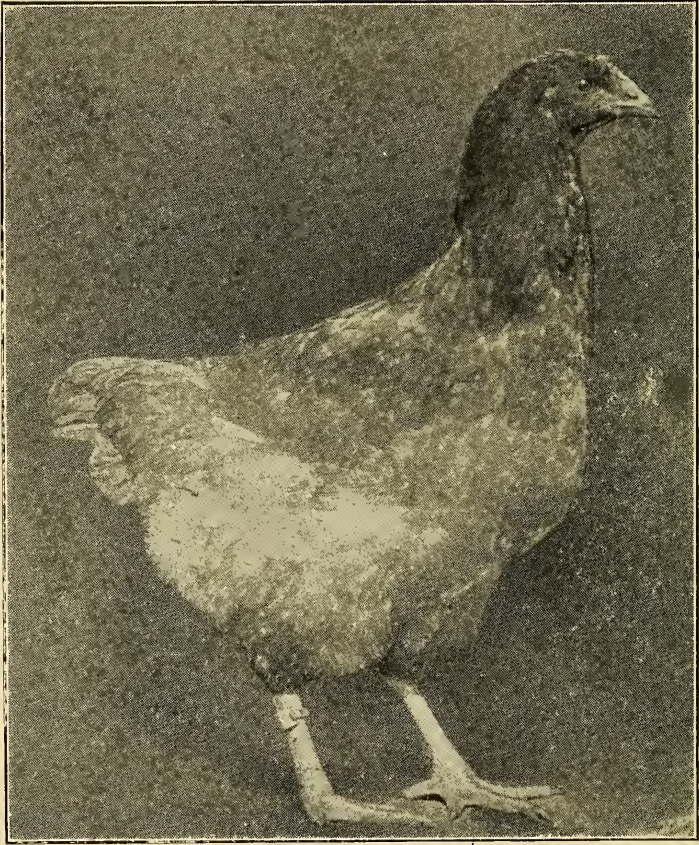
You may test a few eggs by putting them in a basin of water. They will lie on their sides if they are good. When bad they stand on their small ends. Very old and bad eggs even float on the surface of the water.

The poultry raiser should know well the character of every food compound and its work in the body—protein to replace worn-out tissue; carbohydrates to produce heat and energy and to fatten; fat to do the same only two-and-a-half times as well; mineral matter to make bone; and water to irrigate the body.

Fresh air is as necessary to the hen in her sleeping room as to her master. The air may be cool but it must not be close or damp. Muslin in the window is better than glass because it gives more fresh air and yet keeps out the dampness. With dry, fresh air and plenty of good feed, Leghorns have been known to lay in zero weather.



S. C. BUFF ORPINGTON COCKEREL
G. B. Moorhead, Lynchburg, Tenn.



S. C. BUFF ORPINGTON PULLET
G. B. Moorhead, Lynchburg, Tenn.

FARM NOTES ON POULTRY

It is well for the farmer to gather up all the poultry science he can but he should mix with it a great deal of personal experience and observation. Science alone won't make anybody rich in the poultry business.

To fatten fowls on the farm put them up in coops containing about four birds each. Feed three times a day with a soft batter made two parts of oats chopped fine and one part of ground buckwheat mixed with skim-milk. Sift out the coarse hulls from the oats.

Why do farmers neglect their poultry when they have nothing else on the farm that would pay better? That is a hard question to answer. It must be because they do not think and are careless and negligent.

Some farmers think it takes too much time to care for farm poultry. This is a mistake, for if proper facilities are provided and the work systematized, any intelligent boy or girl can do all the work needed by an ordinary farm flock by working only a short time each day.

If every farmer would provide good houses and proper supply of feed, his wife could take the poultry of the farm and make more money out of it than her husband does from his hogs.

CULTIVATE YOUR FLOCK

Do you know that hens appreciate the amenities of life in some measure the same as you do? All animals have this susceptibility more than we give them credit for. A cat or a dog knows when it is welcome in the master's presence the same as he does. Who has not received from his cat or dog an unmistakable look of reproach, when, instead of the expected caress, it was ordered away? I know of a woman who sings to her cows when milking, and claims that it results in a greater flow of the white nectar. There are persons who claim that hens will lay more eggs when you talk to them and pet them. I don't think there can be any doubt about the truth of this, for we know that a happy state of mind promotes activity in the life processes of the physical system and this includes the production of eggs. No; you can make no mistake by being good to your hens.

The proper coloring of eggs is a dark brown for the Asiatics, a light brown for the Americans, and pure white for the Mediterraneans.

THE WONDERFUL HEN

Did you ever study a hen closely? I can't say that I did; but others have, and they tell us wonderful things about the hen, as common a creature as you might ordinarily take her to be.

The hen knows things that a man never dreamed of before she let him into the secret. It puzzles us to imagine how the little hen found out some things that the wisest man would think only God could know. Yet she knows them and she knows them right.

She knows that on the eighteenth day after she begins to sit on eggs every little chick turns over in its shell, if it is not already on its back, ready to peck its way out through the top. On getting on the nest that day if the mother accidentally tips an egg over she at once sets it right again.

Why does a hen do this? Because some chicks might not be able to get themselves back into the proper position again, and if they pecked out through the bottom the fluids of the egg would stop the hole and the little chick, just beginning to breathe would be drowned in its own egg fluids from want of air. But how did the hen know?

This is only one of the many wonderful things that the hen knows and does. And yet she never belonged to a mothers' club and read essays on the science of maternity or lectured on race suicide. Such things make us wonder how little we know about this world after all!

The wonderful Indian Runner duck requires water only for drinking purposes. It is not necessary to have water for him to swim in, but a small brook at the back of his yard is not objectionable for grown-up specimens.

A good-laying winter pullet is one that was started right from babyhood and brought all the way up to the day she laid her first egg. And continued laying will only be maintained by giving the same practical care at all times.

When you advertise, always give prices and full information. Spell out every word in full. Always mention the style of combs your fowls have. Don't say that your birds are from another man's strain for that will make us want to go to him. Don't say that you have Reds, Rocks and Leghorns, for there are varieties of each kind and we want to know which. Avoid all these mistakes and you won't be left to wonder why nobody answered your ad.

BOYER'S POULTRY TALKS

A hen that shows unusual development of the abdomen, and has attained the stage known as "down behind" is too fat for a breeder. The hens in a breeding yard should be in good condition, and kept active by scratching for grain.

A broiler will shrink as much as a half pound after being dressed. Live broilers should be shipped at three to four pounds per pair, and dressed, not under two and a half pounds per pair.

To a hungry person, any old hen may taste tender and good, but to the epicure, only the best grades sell well, and it is to this class that the market poultrymen must cater. They pay the price.

Fowls of the larger breeds are best fitted for fattening. The age may be anywhere from three to five months, and the condition of the birds should be such as to show healthfulness and a tendency to take on fat.

Fat poultry—but not hog fat—is pretty sure to always bring a good price. On the other hand, it hardly pays to ship poor, scrawny stock. If shipped together in one lot, the scrawny ones will cause the good ones to be cut down in price. It is profitable to sort and ship in separate lots.

The following method of "finishing" broilers, has been used by some poultrymen for a number of years: When nearly large enough for broilers, the chickens are put into a pen having a shady run and a shady side. Here they are given clean, fresh water once or twice a day, and all the fattening food they can eat. Corn in various forms is given—cooked, ground and whole. For variety warm potatoes and bread crumbs are added to the ration. Also, when it can be had, milk is given them to drink. This method will produce plump and fine looking carcasses.

It is generally believed that egg formation takes place at night.

Roasters are shipped at from four to six months of age.

The majority of markets prefer yellow-skinned carcasses. The bulk of the meat of a fowl is placed in the breast and thighs. It is important to have a breed that grows rapidly and fleshes up young.

The market weights for roasting fowls vary from 2½ to 3 pounds, according to the season. Small bone, short legs and well rounded form are good points desirable. The

early roaster markets call for light weight birds, the weight gradually increasing until late fall and early winter.

As a rule, chicks that grow their feathers slowly are hardier and grow faster than those that exhaust their strength by feathering out early.

The farmers of Rhode Island have bred the Rhode Island Reds for fully thirty years. They are a solid, meaty fowl, with short thighs, long breast-bone, deep yellow skin and light pin feathers.

The White Wyandotte is a good sized blocky breed, well furnished with breast meat. Being small boned, their weight is in the meat, as compared with fowls of heavier frame. This variety leads for broilers and roasters, as they are hardy, the chicks grow fast and stand considerable forcing. Until the chicks weigh about a pound or a pound and a half, they grow very few feathers, their gain being in their plump bodies.

Linseed meal (oil cake meal) is the product of the linseed oil factories. As a poultry food it is superior to cottonseed meal. It is very fattening, and therefore should not be fed too strongly. Mixed with ground grain in the proportion of 20 to 1 is about right.

Bulk in food is required for health. Rich and concentrated food is not readily digested and invites disease. Some poultrymen are of the opinion that a craving for bulky food is one of the causes of feather-eating in winter among confined poultry.

Clover cured only enough to preserve is excellent, and fowls will eat a portion of it all winter when they would turn away from cabbage. The shattered heads of clover from the hay mows are one of the most valuable of foods for egg production in winter. Pour boiling water on the clover heads, cover them with a bag, and allow them to steam and soak until the mess has cooled down to about blood heat, then drain off the water and use a pint of wheat bran with each two quarts of clover heads. Mix thoroughly and feed warm.

The following formula for roup pills is recommended: Half a dram each of cayenne pepper, ginger, mustard; half ounce of plain vaseline or clear lard; mix thoroughly and add enough flour to make a tough dough. Make into pills the size of a pea. Dose, one night and morning.

THE BRAHMA AS A UTILITY FOWL

Uncle Isaac Felch, in recent writings, is again extolling the merits of the Light Brahma fowl as a utility bird. Mr. Felch in his contention is correct. He has shown that this variety cannot only be made excellent winter egg producers, but that for broilers or roasters they have no superior.

The writer has bred Brahmas for years—probably as long as has Mr. Felch. The first love was the dark variety; but since the introduction of the Light Brahmas, that former variety seems to be placed in the background.

Between the two varieties, however,—the Light and the Dark—the former far excel. In point of plumage they about equally divide honors. But it is to the Light variety that we wish to particularly refer.

As winter layers, Light Brahmas, if properly fed and cared for, will give more eggs than any other breed the writer has ever tried. Not only do they show their ability in numbers, but the size of the eggs exceeds that of any of the American or Asiatic classes, and, besides, the color—a rich brown—is of the best, and just such a shade that would fill the breeders of the American class with joy.

It does not end with their laying. They will make quick broilers—in ten weeks from the time they are born they are plump chickens. We can never forget a lot of young stock we some years ago saw on a farm in Massachusetts. They were but sixty-one days old, and the weights were, cockerels—we weighed but eleven—three pounds and one ounce for heaviest, and two pounds and four ounces for lightest. The pullets weighed two pounds and eight ounces for heaviest, and two pounds for lightest. These were live weights.

Mr. Felch himself accompanied us to that farm so that he might prove his contention that Light Brahma chicks at eight weeks of age make good, plump broilers.

But there is a marked objection to the Brahma as a broiler. It comes not in quality and quantity of flesh, neither is it the time of maturity, but simply in the fact that the American fad does not want feathers on the legs. And why not? We do not eat the legs, but the peculiarity of our market buyers say it spoils the appearance. We must cater to the whims of the market.

However, there is a place for them where there can be no objection, and that is in the roaster class. In this they are ideal. Large enough and fit for a king. There is both quality and quantity of meat. At six months of

age they are in prime condition, weighing easily a pound for each month's age—six pounds for six months—and if they are kept for a full year, and all that time properly fed and cared for, they will give twelve full pounds for that year's lease of life.

Truthfully it has been said the Light Brahma is the King of the Roasting Fowls, but we wish to add an amendment—it is the Peer of the Utility Class.

MARKETING EGGS

Don't forget that marketing your eggs right is one prime factor of success with poultry. The first thing, of course, is to please the customer whether you sell by wholesale or retail. If the customer is not pleased you will lose your trade and do no good.

The first way to please your customer is to sell him none but good stock. This is absolutely necessary. It will never do to have a spoilt egg go upon the table of a discriminating customer who pays a big price for a fine article.

If you aspire to highest-price customers you should sell in cartons, or neat paper boxes with each egg wrapped in tissue paper in a small compartment to itself. At wholesale these boxes add but little to the cost of production but greatly increase profits. Have your name, business and postoffice address, with a beautiful poultry scene printed on the top of the box. These will add much to your character as a poultryman and enable you to ask higher prices. But the greatest thing is to live up to all this by never meriting a complaint of any kind.

Before packing your eggs they must be graded carefully. White eggs should be put to themselves and dark shelled ones the same. Throw out all that are undersize, or oversize, or in any way abnormal. Every egg must be perfectly clean and fresh. In hot weather they should be gathered twice a day and kept in a cool place. They should be marketed at longest, once or twice a week. In delivering goods, your personal appearance and the character of your horse and vehicle will tell decidedly upon your business.

The Houdan is a small-boned fowl, having a thick breast, and the flesh is tender and juicy. They make fine broilers and the best roasters.

SUNDRY USEFUL HINTS.

The number of pounds of food elements we buy in a ton of linseed meal is 564.4 muscle makers; 65.2 fat forming; 142.0 pure fat. In a like quantity of bran we have 223.4 muscle makers; 1,085 fat forming; and 70.4 pure fat.

When a hen is discovered with closed eyes and a very hot head, no more effective treatment could be given than taking a cupful of hot water, in which is dissolved a tablespoonful of salt, and applying it to the head as hot as it can be borne. This will reduce the swelling and allay the fever. This treatment should be followed by giving a one grain quinine pill each night for three nights, during which time the hen should be kept in a comfortable enclosure alone, and fed on soft nourishing food.

Cold storage men claim that brown-shelled eggs, being heavier and thicker, preserve better than white-shelled ones.

Soft-shelled eggs can be caused by one of four conditions: lack of sufficient lime in the food; indigestion; overfat; fright.

The grade of eggs demanded for the British trade is one that will weight $1\frac{1}{2}$ pounds to the dozen, and for every half pound of eggs that weigh less than fifteen ounces to the dozen, the value is lessened by about one cent per dozen. Those engaged in the import trade believe that in large eggs the albumen is thicker than in small ones, and that about ninety per cent of the stale or bad eggs are small eggs with white shells. Shells of a brown color are preferred, and must be clean without having been cleaned.

The chief peculiarities of the English method of dressing poultry are: killing by wringing the neck, not by chopping or sticking; feathers left on the neck for a few inches from the head, also a few feathers on tail and tips of wings; the breast bone is sometimes broken down by pressing it to one side with the thumb; wings are twisted to the back of the bird.

The French method of preparing poultry for market is acknowledged, in some respects, superior to others. The birds are made very fat and plump, and are manipulated to increase plumpness. A few feathers are left on tail and neck. The skin is white and delicate. Each carcass is tied with a ribbon, and is shown back uppermost, instead of breast up, according to American and English usage.

It is when the duck is not laying that she readily takes on fat.

Scientists tell us that a ton of wheat contains 41 pounds

of nitrogen; barley, 32 pounds; oats, 38 pounds; corn, 32 pounds; peas, 70 pounds; beans, 81 pounds; hay, 31 pounds; clover, 39 pounds; milk, 10 pounds; potatoes, 6 pounds.

The French feed considerable buckwheat to their turkeys, believing that this grain imparts to the flesh a delicious, nutty flavor much liked by their epicures.

The late M. Barral, of France, laid down the rule that in every case the food given should be in proportion to the weight of the birds, taking into consideration their active nature and such accessory products as eggs and feathers. Generally speaking, an average hen will consume three ounces of food a day, or over a bushel in the course of a year, but the weight of gallinaceous birds varies considerably, and hence no really definite idea can be formed of what they are capable of consuming to the best advantage.

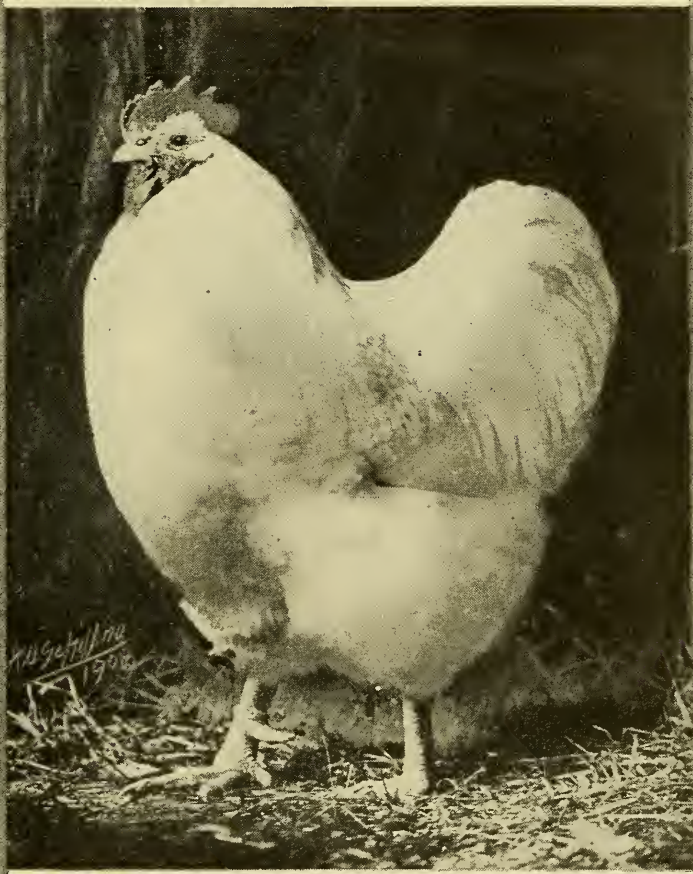
In cases where cock birds have lost their voice, which can be noticed when they attempt to crow, a teaspoonful of glycerine on which has been sprinkled a little chloride of potash, given daily, will be found effective. For more obstinate cases follow with a half teaspoonful of cod liver oil, once a day.

Some poultrymen in the South use rosin in dressing poultry, claiming that by its use they can do the work quicker and more thoroughly. The fowl is first dipped in cold water, then with a perforated can, powdered rosin is sprinkled all over the feathers. The fowl is then scalded in the usual manner, and the whole coat—pin feathers and all—it is said, comes off very easily in the mass, and the job is complete. It does not in the least affect the appearance of the skin.

Short-cut, green-cured alfalfa is the best available green food for hens in winter. Green ground bone or commercial beef scraps furnish the best animal feed.

Your products must be marketed in neat, clean shape. Small cartons, holding 1, 2 and 3 dozen eggs is the best way of handling market eggs, if delivered direct to consumers.

Capon and poularde rearing is a general industry in Normandy, Maine, and La Bresse (a capon is a castrated male bird; a poularde is a female that has been operated upon). Poulardes are peculiar to the LaFleche and LaMans breeds. It is the peasant farmer who fattens the young hens and creates the industry.



FIRST PRIZE COCK MADISON SQ GARDEN N.Y.
OWNED BY
KELLERSTRASS FARM, KANSAS CITY, MO.

CRYSTAL WHITE ORPINGTON COCK
Kellerstrass Farm, Kansas City, Mo.



CRYSTAL WHITE ORPINGTON HEN
Kellerstrass Farm, Kansas City, Mo.

ARTIFICIAL INCUBATION

For successful work it is necessary to have good incubators, good eggs, and good, common-sense management. The same directions that apply to one make will not necessarily do for another. Neither can the same directions successfully fit all conditions.

But there are some matters that will generally apply to all incubators.

In the first place the machine should be strongly built of well-seasoned lumber. Next, it should be located in either a well-ventilated, dry cellar, or in a double-walled room above the ground.

The first proper step to be taken is to carefully follow the directions as given by the manufactures. One or more hatches may be necessary to note whether the directions fit your conditions. If not, then there can be gradual changes made, as might be suggested.

Important rules to remember are:

Fill the lamps each evening, and never use oil of less than 150 degrees test.

Always begin a hatch with a new wick.

Keep the temperature of the egg chamber as near 103 degrees as possible, and keep the incubator away from the sunlight.

Test on the seventh and fourteenth days. Study the air cells of the eggs to determine if moisture or ventilation is needed.

After the fourth day turn the eggs night and morning, up to the eighteenth day.

Keep the burner clean from dirt, and scrape the charred part off the wick in preference to trimming it.

Never turn up the flame of the lamp so high that it will smoke.

In placing the eggs in the machine, have the large ends pointing the same way, and never add eggs after the hatch has started.

Cool the eggs after the fourth day, by placing the trays on top the machine, and placing a thermometer on a fertile egg. As soon as the temperature has fallen to ninety degrees, return the trays to the machine.

If the air cell of the egg is unusually large, add moisture; if small, give ventilation. The air cell on the first test should measure a quarter of an inch from the middle

of the large end; five-eighths inch on second test, and three-quarters inch on the nineteenth day.

Incubating white and brown-shelled eggs at the same time in the same machine generally results in unsatisfactory hatches. The shells of the former are thinner than those of the latter, and consequently require different treatment.

After removing the infertile eggs, in order to have an even temperature for the eggs in the machine, spread out the fertile ones in the trays so that they will occupy about the same relative position to one another.

In selecting eggs for hatching have them of a uniform size, neither too large nor too small. Also reject thin-shelled eggs, and those having a ridge around them and poorly shaped ones.

A small egg has much more shell surface in proportion to contents than has a large one, so that to run the machine to suit the small ones will be too damp for the larger ones, where moisture is used, and vice versa.

Before starting the incubator clean out the heat or flue pipe into which the lamp chimney extends, and clean all parts of the lamp thoroughly, having the burners as near as possible as bright as when they were new. Use good machine oil on all the bearing parts of the machine, after first removing all dust and dirt.

Do not blame too much of your incubator failures on your machine. Fertile eggs depend on a healthy, well-kept and properly-fed flock. Hens that have had roup and been apparently cured will be a very poor dependence for fertile eggs. It is as C. O. Brown once said: "Incubation will often commence with eggs laid by such hens, continue for a period satisfactorily, and then suddenly stop." Of course in such cases the incubator is blamed when it really belongs to insufficient vitality in the eggs. We can look for the same trouble with eggs laid by overfat hens. And equally so when the male bird heading the breeding yard is too fat.

The following is said to be the recipe for making Vale's roup pills, a popular English remedy: Hydrastin, 3 grains; sulphate of iron (dried) and sulphate of copper, 3 grains of each; powdered capsicum, 12 grains; oil of copaiba, 20 drops; Venetian turpentine and calcined magnesia, of each take enough to make 24 pills. Dose for adult fowls, one or two pills, night and morning.

THE CARE OF POULTRY

THERE is nothing that responds more readily to care and attention, or that suffers more from carelessness and neglect, than poultry. You that have failed to make poultry profitable are yourselves responsible, either from ignorance or carelessness. Warm, cozy quarters in the winter, and cool, shady quarters in the summer, with an abundance of fresh water, wholesome food, and cleanliness, are the essentials of profitable poultry.

It must not be enthusiasm and attention one week, with carelessness and neglect the next, but it must be painstaking care and attention every day and every week.

Much also depends upon the time of the year the chicks are hatched. Study the climatic conditions where you live and then determine for yourself the best time for hatching. To those of us living South of the Mason and Dixon Line I advise that all chicks be hatched during the months of February and March—never later than April.

By early hatching a threefold result is obtained: First, you do not have to contend with lice, mites, gape worms, etc., in the early age of the chicks, and you will therefore raise a larger percentage of the chicks hatched. To raise 95 per cent. of the chicks hatched in these months is not uncommon. Second, the early hatched chicks will mature more rapidly and grow to a larger size than later hatched ones. Third, early hatched pullets will begin laying early in the fall and lay throughout the entire winter when eggs command the highest prices.

In order, however, to have winter eggs, I have satisfied myself that it is absolutely essential to have a warm house with floors and a southern exposure and a scratching pen. Without these, pullets and hens will be a dead expense during the winter months. I can put eight pullets in a piano box and get more eggs in the winter months than you can with thirty pullets that are allowed to run at large with only a roof for a shelter. You don't believe it? Try it!

Now as to young chicks, keep them penned up; you like to see them running at large—but keep them penned up. Little chicks allowed to run at large in the early morning dews and in newly plowed fields are certain to contract sore head and gapes. Did you ever see a person trying to cure chicks of the gapes by using a horsehair? They might as well try to bail out the Gulf of Mexico with a pail. I had a chick with the gapes killed and examined under the microscope. We found that there were thousands of little gape

worms in the chick. The gape worm is of a very low order of life and we found that it responded more readily to turpentine than to anything else. The worm is from one-half to three-quarters of an inch in length and is in the shape of the letter "Y," one of the prongs being a bag or sack filled with eggs. It is very prolific, and as soon as the sack opens hundreds are born. Camphor pills will sometimes cure a chick of the gapes. No medicine can reach them unless it does so by vapor. An hour after the chick has swallowed the pill it smells of camphor. Camphor is a very strong vermifuge, and the worms die. Another good remedy is caustic lime in a dry, powdered state. It may be either air or water-slacked. Hold the chick in the left hand, open its mouth with the thumb and forefinger, and with the other hand, drop a pinch of lime into it. Hold in this position for a few seconds until it is obliged to breathe, when it will inhale some of the lime; then let it go. By all means put a few drops of turpentine in the drinking water.

We have heard much of the so called "sure cures" for poultry diseases, but there is only one sure cure that I am familiar with, and that is a cure for cholera. Take red pepper pods and cut them up fine and boil in enough water to mix the bran or meal; to this add a little lard, mix up and feed to the poultry. If they are beyond the eating stage, force it down them three or four times a day and within a few days you will see that your labor has not been in vain. It has been years since I have lost a bird from cholera. It is a good idea to feed red pepper in the mash about once every two weeks in the winter, and to feed salts about once every two weeks in summer.

Here are a few poultry rules that will be found profitable:

1. Construct your poultry houses good and warm, so as to avoid damp floors, and afford a flood of sunlight. Sunshine is better than medicine.
2. Provide a dusting and scratching shed where you can bury grain and thus induce the fowls to take the needful exercise.
3. Feed systematically two or three times a day; scatter the food so they can't eat too fast, or without proper exercise.
4. Do not feed more than they will eat up clean or they will get tired of that kind of food.
5. Give a variety of food, both dry and cooked; a mixture of cooked meat and vegetables is an excellent thing for their morning meal.

6. Do not crowd too many in one house; if you do, look out for disease.

7. Use carbolic powder in the dusting bins occasionally to destroy lice.

Fresh milk with a dash of pepper, and green cut bone are the best things to feed laying pullets. I have fed fresh beef scrap, but with not so good results. Fresh beef scrap should be fed sparingly—not over twice a week. It seems that eggs are not so fertile when fresh beef scraps are fed.

To beginners in poultry I would say: Don't expect to be able, by buying fancy-priced stock, to produce "blue ribbon winners" at the start; don't go in the business of selling fancy stock at first—a person must be an experienced and well known breeder before he will be able to receive high prices for his birds; it is best to select your breed carefully and stick to one breed; buy good "bred-to-lay" stock from a reliable breeder; study how to realize a profit by selling poultry and eggs for market; study your "Standard of Perfection" and gradually work up to breeding fancy prize-winning birds.—HAYDEN CLEMENT, Ass't-Attorney General, State of North Carolina.

TO FREE FOWLS OF LICE AND MITES

I put fresh water out every day for my chickens, turkeys, etc., says a writer in *The Farm World*, then once in two or three weeks I add a tablespoonful of sulphur, a half teaspoonful of red or Ceyenne pepper and five drops of coal oil to two gallons of water. This is a simple, harmless medicine, yet I never have roup among my fowls, nor do mites infest them or the hen-house. Just as soon as the little chicks come to view I take them away from the hen and put them in a warm, comfortable place—a box or basket—until all are hatched, then I place the mother-hen in a coop by herself and give her the little ones. If I have not plenty of hens I give several broods to one that has proved herself a good mother; or take all away, let the hens sit again the second, even the third time, and bring the chickens up "by hand." One can accomplish wonders when one makes up one's mind to do a certain thing. If you are interested in poultry-raising get all the information you can, take pains and use common sense, and you are sure to succeed. Cleanliness is a good thing—you cannot have too much of it, either, so far as poultry is concerned. I clean my hen-house out every morning, at least, throwing ashes over roosts, floor and nests. This is very important.

SOME NEW "SECRETS" IN SELECTING BREEDERS

IN THE selection of breeding stock, the individuals that have developed most strongly the primary characters of their sex should always be given the preference, but as this matter of strong sex individuality is not always taken into consideration by the average breeder, he, in many cases, works against his own success because success in full measure can never be attained except this matter is fully understood and bred for.

There are effeminate males and masculine females—those in which the characters of the opposite sex are unusually developed and it is needless to say that such birds do not make the best parents from which to breed.

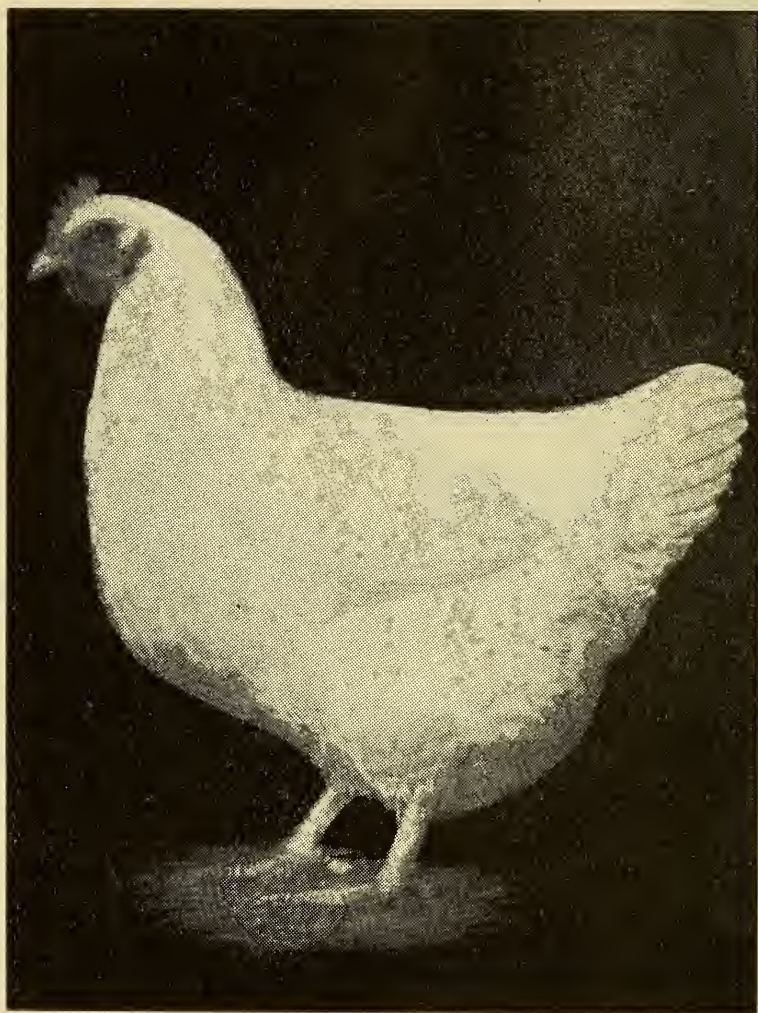
In the selection of the male bird, none but a fully matured bird should be used to perpetuate his kind, and by a fully matured bird we mean a bird which has developed all his secondary sexual characteristics as near to perfection as is possible. Nature has some laws that cannot lightly be trifled with and this is one of them; for, though it is true that an immature bird may be bred from, yet this same bird under more natural conditions would never find enough mates to do much damage to the type of the breed. The older bird is better furnished with means of defense, and the younger bird is routed from the breeding preserves, and until by means of successful battle he can maintain his position as sire of the flock in the natural state, his chances are very slender for propagation. In fact, this state of things can be observed in almost any farm yard where fowls are left to themselves for here it is invariably the male bird with the most vigor and the most fully matured sexual characteristics that becomes what is commonly called "the cock of the walk."

Where birds are bred for certain desirable features, such as plumage and other Standard requirements, things take on an entirely different aspect, because natural selection and the survival of the fittest are set aside, supplanted by artificial selection which may, as we all know, work an entire change in a species for better or worse, as the requirements of the fancy may dictate.

Now, a male bird may be strong and active and in good physical health, and yet be a poor breeder. He is, rather, an eater; he puts on flesh, is a glutton, a hanger-on, that first and foremost attends to his own needs in preference to those of his consorts with which he is mated. He would in case of encroachment of another male, not show fight more than a minute, run, hide his head in a corner and utter sounds



WHITE PLYMOUTH ROCK COCKEREL
Patterson Farm, Fitzgerald, Ga.



WHITE PLYMOUTH ROCK HEN
Patterson Farm, Fitzgerald, Ga.

very much like a hen in distress, wings hanging, tail dragging—a coward and effeminate all through, that never for a moment could sustain his sireship of the pen if it had to be fought for. On the other hand, a male may be in poor health and yet be a strong breeder. He knows, or nature knows, that his time is limited and so he gives up reluctantly to the encroachment of other males on his premises and it is only for sheer lack of strength that he is vanquished, and never for lack of courage. Now, either one of these males should be avoided. It should be the purpose of the breeder to encourage every atom of the sexual instinct in his sires, and make it a strong point in his mating, never to use, if it can possibly be avoided—and it must be avoided—any male of the above description.

A fit breeding male should be a fully matured male; a male that is well spurred, that spoils for a fight, that will fight to a finish and if defeated crow his spite against his antagonist, dying. Such stuff as this makes the right kind of a breeder. He is ever on the alert, watching, guarding, calling the females, and would starve first before he would satisfy his own hunger as long as he could get one of the females to eat the last morsel. A strong crower, which means good strong lungs, which in turn means less liable to disease, last on the roost at night and first off in the morning, comb blood-red and eyes bright, full of the spirit of animal life, clapping his wings incessantly, dancing before the females, spreading his wing and displaying his beauty to the ladies of his harem. This is the strong, physical breeding characteristics of a male fit to perpetuate a race of hardy, healthy stock. The hackles should be long and flowing and an abundance of them; the saddle feathers and furnishings abundant, and nothing so detracts from the appearance of a male as scanty tail furnishings. Let the tail be well furnished, sickles long and flowing, and with the spread of legs that looks so well and bespeaks the confidence of his own powers to maintain the supremacy over his flock.

Scanty furnishing, knock-kneed, and awkward, ungainly looking males should be avoided. There is a natural grace in a male that should in every way be encouraged. Scanty tail furnishings is the cause of many a high-tailed bird. He has only a few feathers and they stand up straight; not enough of them to maintain the tail at the proper angle. The breeding from immature males is largely to blame for the lack of proper furnishings, as it is still true that "like begets like," and when immature males are used generation after generation no better result can be expected. The furnish-

ings of a male is his badge of maturity; they show him to be fitted to breed from and no male bird is as handsome and as fit to breed from as in his second year, and it is about the same with all the different species of the Galinaceous birds.

The females should be selected with the same care regarding their secondary sexual characters, as it is just as bad to use a "cocky" hen in the breeding yard as it is to use a "henney" cock; both of them will be of little use in the perpetuation of their species.

Hens that begin as pullets to show signs of developing spurs very rarely make good layers; they will be found slow to come to the laying age, and their eggs will not be very numerous, nor, as a general thing, will they prove very fertile.

She will very often resent any advances made by the male in her second year, and if permitted to live out her existence, this tendency will be still more pronounced. She is generally the female in the open pen that the male takes a dislike to; the one that generally causes a disturbance whenever she has the opportunity, and she frequently makes the opportunity herself if it is not otherwise to be obtained. On examination of her internal organs it will be found that her ovaries are small, in many cases rudimentary, and in one sterile hen examined, they were shriveled and atrophied.

Now, it can be readily seen from this that it is of the utmost importance to look after the female that in every sense of the word stands out prominently a type of her own sex, and that however good her fancy points may be, a female showing strong tendencies to partake of the male characteristics should be used with a great deal of hesitancy, if at all, for it must be admitted that, to encourage the perpetuation of such characteristics, will in the end prove disastrous to all the hopes of the breeder by becoming their own extinction, which, with one breed, has taken place several times until males with more pronounced male characteristics were introduced to rejuvenate the strain.—REV. C. E. PETERSON, in *Poultry Fancier*.

Because there are failures with poultry is no argument that the business is a failure. There are lots of people who never make a success of anything they undertake. Work out your own salvation, and never mind what the croakers have to say.

HOW I CARE FOR LITTLE CHICKS

AS IN all other undertakings, good management is the true secret of success. There never will be any method of raising chickens to beat the genuine old hen with free range, but the trouble is that too many of the hens are no earthly good and too many chicks are killed from neglect and exposure, so that I claim I can produce better results with a good brooder than with hens for early chicks.

With the latest improvements in artificial brooding, and with proper feed, nearly all chicks that are properly hatched can be raised with good management.

It pays to have everything as near right in raising chicks as possible, as the number saved will pay all extra cost necessary to give them proper protection.

Leave all chicks in incubator until about 48 to 60 hours after the first egg is pipped, and then remove to brooder, which should have been previously heated to about 90 degrees, being careful not to chill them on the way in cold weather.

As you remove them from basket to brooder dip the bill of each in the drinking dish, which gives them their introduction to this important part of their diet.

The floor should have been sanded and a little fine chick charcoal and grit scattered around for them to pick at for half a day; and just before going to sleep for the night, give them their first feed of a good grade of little chick feed.

The next morning some hard boiled eggs crumbled and mixed with wheat bran make a very good feed along with crumbled crackers. While fresh milk is good, still I prefer the milk or water boiled at the start, as it is a preventive of diarrhoea, and every precaution you can take for the first five days pays. Scatter the prepared chick feed in litter (chaff or short cut alfalfa is best), and let them scratch for it, but be careful to see that the grain is not sour and the litter is in a sanitary condition. Steel cut oat meal fed once a day makes a very valuable feed, also oatflakes and broken rice are valuable to build up their frames and make strong, healthy chicks. Keep them a little hungry and scratching all the time.

Do not give chicks any more heat than is strictly necessary, as it is a very bad plan to get them tender and weak. Just as soon as you can leave out the lamp do so and gradually teach them to go to roost on some wide boards so there is no danger of crooked breast bones.

When about a week or ten days old give them high grade meat meal in hopper and keep it before them all the

time, as by doing that they do not eat too much and it is a wonderful help to quick and full development of the prize winning and early maturing stock.

Give all the green feed you can to young chicks, in one form or another.

Cabbage, lettuce, beets, or any other green feed, will help their growth, and if hung just a little too high for them to pick from the ground it will give them the best of exercise in jumping for it.

There is nothing like free range to produce perfect, ideal specimens, and the more we can provide for the growing chicks in the line of shade and foraging material by artificial methods, the better chicks we will have.

POULTRY POINTERS

Statistics tell something but they do not tell everything. The facts which they record often vary at different places and with different circumstances.

In beginning the poultry business you don't want to adopt too many theories without investigation. It is important to get down to solid facts as soon as possible.

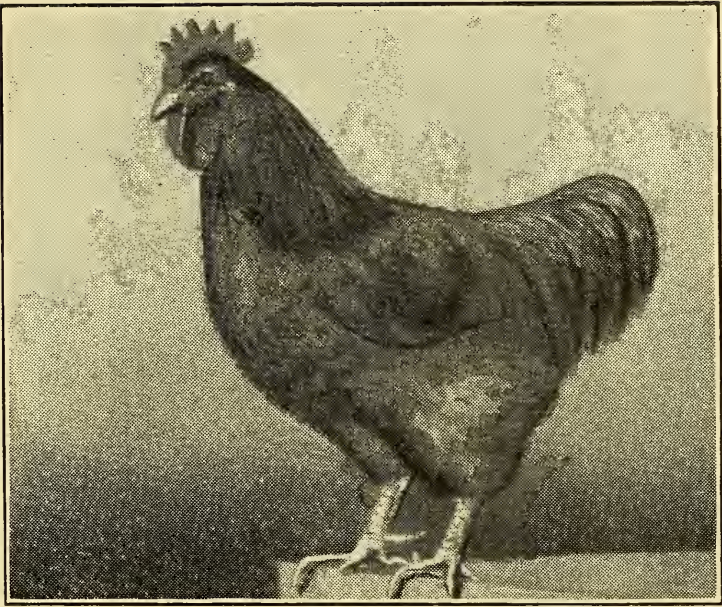
Why is an odd number of eggs placed under a sitting hen? The number is usually 13 or 15 under a hen or 9 duck eggs or 5 goose eggs. The reason among the ancient Egyptians was that an odd number kept evil spirits from injuring the eggs.

Farmers would make more out of poultry if they kept more hens and those of a more profitable kind. They also keep too many that have passed the profitable age, which is two years. The old ones should be constantly sent to the market and young ones brought up to take their places.

In old times but few eggs were sold in the summer months because it did not pay. Now no more welcome person visits the city than the farmer with fresh eggs. No fears but that your eggs will sell this summer.

Six hundred White Leghorn hens will give you an income of \$600 a year after all expenses have been paid out of the sale of eggs alone, and at ordinary market prices. This has been easily done and the profits may be increased by raising fryers and broilers.

Miller Purvis tells of a farmer's daughter who had finished her education and proposed to divide profits with her father if he would set her up in the poultry business. At the year's end she shared a little more than \$700 with him. Then the farmer wondered why he had not done it himself.



S. C. BUFF ORPINGTON COCK
B. S. Horne, Keswick, Va.



BUFF ORPINGTON PULLET
W. E. Kirksey, Greenfield, Tenn.

MONOPOLY--NOT FOR THE POULTRY BUSINESS

FOR many years it has been boasted by poultrymen that they were engaged in a business that could not be monopolized by trusts, combinations or corporations, but it now takes only a slight foresight to clearly observe the shrewdness of certain interests in seeking to obtain a death grip on this branch of industry, as well as others.

The poultryman has a good chance to steer clear of such a calamity, if he keeps his ears and eyes open, and properly holds his ground.

The poultry and egg business is no business to be monopolized. The buying public are anxiously longing for release from the cold-storage and miscellaneous commission-house eggs. They are clamoring to pay a premium above market price for strictly fresh, guaranteed eggs delivered to them daily.

It was very recently we noticed an advertisement in a daily paper of a nearby city. A man advertising for strictly fresh eggs delivered daily, offering to pay 50c per dozen for same, and wanted one dozen per day.

Bear in mind this is only one instance. There are hundreds in this same city who would do likewise and there are hundreds of thousands in other cities who would be willing to pay any reasonable amount for strictly fresh eggs.

With such enormous opportunities as these, what excuse could any poultryman offer for allowing himself to become trapped into any scheme, which, when completely sifted through and worked out, will only show the appalling results, such as shown by the results of other combines, monopolies, etc.; namely, financial and political greed and satisfaction of the few controlling the monopoly, and the disappointment and utter failure of the common masses. Such a combination in the poultry industry would be a blow never to be recovered from.

Monopolies in other lines of business have shown the broad-minded citizens of today that some change, some relief, must be brought about for the protection of future generations.

The poultry business is not a mere toy to be trifled with. It is now nearly the most enormous industry in the world. It is not merely for this generation, for at present it is in its infancy. With the enormous development of our country necessarily comes an enormous call for food. The trusts now controlling the meat markets, have placed meat at prices

almost out of reach of the common classes of people. Consequently they turn to eggs to supply this need.

At from 25c to 35c per dozen, a fair-profit can be realized from egg farming, either on a large or small scale. When eggs reach 50c to 60c per dozen they are then refused by the masses, who cannot afford to pay such prices, and the demand necessarily diminishes. Should the prices remain within the reach of the masses, the demand will be greatly increased and egg farming by individuals will be profitable.

A direct trade is urged. Do not sell your eggs wholesale or to traders unless you have no other market available. Either put your products *strictly fresh*, direct into the hands of the consumer or direct to the retail dealer who will deliver them fresh to his consumers.

It stands every poultryman well in hand to be ever on his guard. Be alert to the cunning of promoters of any monopoly of the poultry business, that not only we who are at present engaged in this work be kept free from the coils of this venomous reptile but the generations to follow us. —FOUNT H. RION, Brentwood, Tenn.

BREEDING ON THE FARM

It is not inbreeding that causes your fowls to "run out," but lack of care to select the strongest, most vigorous, healthiest, and fittest for mating. Use a weak, undersized bird and of course your stock will run out.

The farm poultryman has usually very poor and incorrect ideas about breeding. He jumbles everything together and is constantly introducing new males to recover his flock from its rundown condition.

The proper policy of breeding to pursue is never to allow the mating of inferior stock. All such stock should be killed or sold off. Mate only the healthy, the vigorous, and those that grade high in the line of improvement which you desire.

It is very bad policy to doctor up the sick and weak individuals of your flock and then allow them to propagate their kind. Better kill them and give them to the hawks and the owls. Mate none but the most perfect in every respect.

If you want a flock of laying hens breed from none but the best layers. If you want a heavy meat-producing flock, breed from the big, the strong, and the vigorous. If you want perfect form and color, breed only from specimens of that type.

WISE WORDS BY UNCLE BEN

What this country needs is more poultry keepers. The call is not for large establishments, but for good-sized flocks of pure bred fowls on every farm. The general farmer is the man who ought to make money out of poultry.

Did you catch the point? Well, then, get from twenty-five to one hundred pure-bred hens and make a start. You may start with a rooster and five hens and build up if you prefer. But whatever you do, don't mix breeds. Keep them pure if you want to do any good.

I wouldn't exclude the city man with a back lot and no other use for it. He may as well keep ten good hens as not. They will occupy his time and bring him lots of good eggs if properly managed.

The man or woman with a large spare lot in the village may also come into the proposition. He can keep a hundred hens as well as not. Around New York many an acre or even a half acre contains its 50 to 250 hens that produce from 500 to 1,000 chickens every year and no telling how many eggs besides.

Of all men, the Southern farmer should keep poultry. He has the climate and everything else to suit. He may easily have eggs all winter in the milder sections. The New England farmer could not square accounts at the year's end without poultry and his opportunity is nothing like so good as ours.

SHORT TALKS ON POULTRY

Standard poultry doesn't necessarily mean perfect birds. There are no perfect specimens. Very few go above 95 points. Fowls that score 85 points or more may properly be styled standard poultry.

Farmers don't put enough variety into their feeding. To do well, poultry must have something else than corn from one day to another, month after month. Sell some of the corn and buy other grain and meat scraps.

Feeding a variety doesn't mean many kinds of food at one time. Changes should be made at different periods. One kind of feed may be given in the morning and a different one at noon or night.

The farm dairy and poultry run well together. Skim milk makes one of the best chicken feeds. Both products can also be very handily marketed from the same wagon.

You can't get many eggs on scant feed. The hen must have enough nourishment to supply the waste to her system before there can be anything extra for eggs.

PROFITABLE PRODUCTION

The question often asked, "Does the poultry business pay?" is indeed one that carries with it a great many doubts.

The only answer to this question is yes, emphatically, yes.

"Does every one that engages in the poultry business succeed?" No.

Many in asking the first question really have in mind the second, and thus get confused.

The poultry business is not a snap for everyone. It is a gigantic enterprise for people of common sense and ability, and these succeed.

To attain the highest profit, one must try to give his customers only the very best that can be produced. He must get his stock on the market early to get the highest price. He must have early pullets and get them started to laying early, and keep them at it.

Meat food and green food are indispensable and must be supplied to regulate the system and furnish the animal food necessary to heavy egg production.

In marketing products, neatness, absolute cleanliness, politeness, and reliability are the essentials upon which profitable production is based.—FOUNT H. RION, Brentwood, Tenn.

USEFUL THINGS TO REMEMBER

It requires an egg with a strong germ to produce a chick with sufficient stamina to make what we expect of it. A pen of hens poor in flesh or weak in constitutional vigor from whatever cause, cannot lay the right kind of eggs.

Your chicks can't grow well and be compelled to wait until nine or ten o'clock for their meal on Sunday mornings.

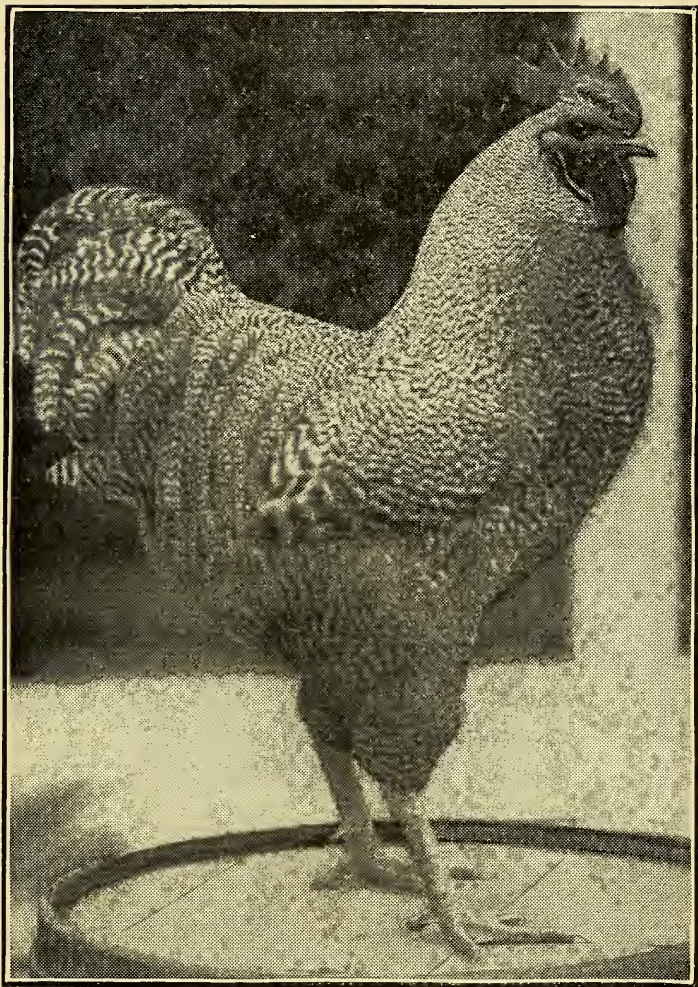
Keep an eye out for rats. Entire hatches can be destroyed in a single night by these pests. Don't allow lumber, logs, brush, and the like to accumulate around your chick yard, as all these afford rats a good hiding place.

Lettuce makes an ideal green feed for old and young chickens; as also does beet tops.

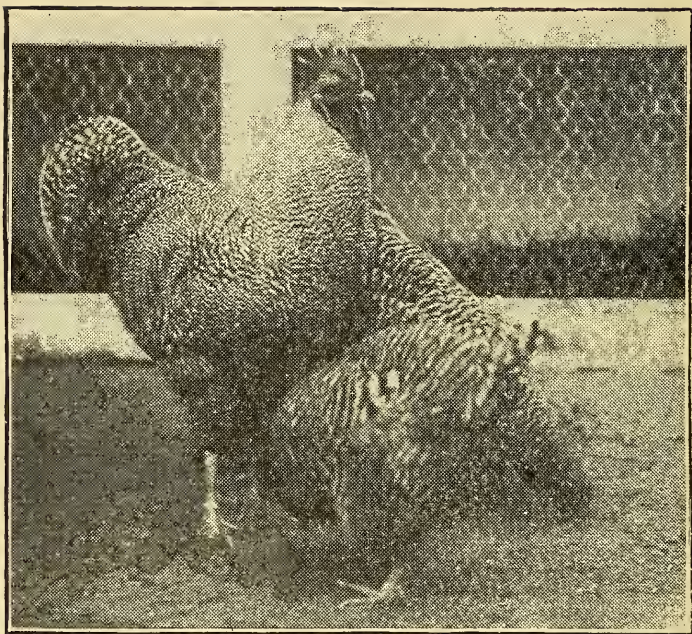
In feeding your chicks grain feed don't make the mistake of feeding cracked corn alone. Use a variety.

If you have free range for your chicks, don't fail to sow some oats for them. The oats draw bugs, grasshoppers, etc., and afford shade as well as food.

It is not only hard to sell a lean chicken in market, but it also is poor eating. A little care and feed will make them more inviting.



BARRED ROCK COCKEREL
W. W. Reeder, Minden, La.,



TRIO BARRED PLYMOUTH ROCKS
W. W. Reeder, Minden, La.

HATCHING CHICKS BY THE NATURAL METHOD

I suppose you know how to set a hen. If you do, that is good. Of course there are some of you that don't, so I will tell you. First, have the sitting-house cool and free from vermin. Arrange the nest so that no two will appear alike, then each hen will know her nest. Make the nest about fourteen inches square, with a four-inch board across the front. Fill the nest two inches deep with moist (not wet) loam. Then shape it into a nest and cover over with about an inch of hay or excelsior.

Choose a hen that is a quiet sitter, and after dark, transfer her to the new nest and give her a dusting with insect powder. Let her sit on a china egg till the next evening, then if she is a good sitter pull her off and feed her. While she is off place the eggs, after being washed, under her: thirteen if she is a small hen and fifteen if she is a large one. Take her off regularly every afternoon and feed her until the 19th day, when she should not be bothered until the hatch is finished. The chicks should be transferred to a light, airy coop to await their first meal which should be given when they are about forty or fifty hours old. If this method of setting a hen is followed, it is not your fault if you don't get a good hatch.—F. W. KINSEY, Rossville, Ga.

A correspondent gives the following advice for trapping minks, skunks, weasles, etc.: Minks, weasles, skunks, etc., often visit the poultry house, and in one night destroy from six to twenty fowls. The best way to capture minks is with a steel trap properly concealed and baited with a bird or fish. Minks travel several miles to get in a poultry yard or house. If there is a pond or stream near the house it is best to trap them along the place of their natural haunts. Take the fat from some fish and fry it out and pour it in a bottle. Leave the cork out and expose it until the oil decays and becomes very strong. A few drops of this placed upon any bait will attract a mink a long distance. Cover the trap with fine leaves or break up coarse leaves so that the jaws of the trap will not be filled up when it springs. If trapping the minks near the water it is best to set the trap under the water and make a fence with weeds so as to compel it to come out at the place where the trap is set.

POULTRY FOR PLEASURE AND PROFIT

Not many years ago, it would have been a hard matter for a person to find very many who raised poultry for pleasure. People in general, those days, looked upon poultry as a part of the good woman's work. For profit, the ladies got just what the poultry were inclined to produce—no pains as to feeding, housing, and the like, being given them. Eggs and poultry meat those days were to be found in great quantities everywhere. Often, farmers would take a basket of eggs to market for the good wife, and be compelled to leave it, depending on the merchant selling the eggs during the next week for from 6 to 8 cents a dozen. But today, all is different. A man or woman who can breed poultry intelligently is looked upon as a business man or woman, and the by-products of the business are eagerly sought after at about any reasonable price the producer wishes to ask.

For pleasure, perhaps, you will find as many people keeping poultry today as those following any other pleasurable pursuit; and for profit everybody seems to be keeping them. You can find a flock of them in almost any back yard, and many of the "pure blooded" kind, too.

There are several branches of poultry raising which afford much pleasure, i. e., getting eggs, show birds, shipping breeding stock, eggs for hatching, and last but not least raising the "sweet little baby chicks." Where can a man find anything more painstaking? Where can he find animal life more enticing? The pleasures and profits derived from poultry care are such as will bring into action more important matters. A man cannot afford to laugh at the occupation today, for if he does, he only laughs alone. People have learned that it takes as much skill to raise good chickens and to produce an abundance of eggs as it does to do anything else one might take up. And for art, nothing will surpass, if equal, the breeding of show specimens.

In making a start in this occupation by all means get good stock to start with.—J. A. THORNHILL, Hartsells, Ala.

The skin of the Langshan is a pure white, and not a dark or bluish white. The meat is fine grained, tender and juicy; thin skin and small bone, and while possibly not so much admired in the market as the yellow-skinned breeds, none surpasses it for tenderness and flavor when served on the table.

THE OLD-TIME BREEDS

IN THE days of our forefathers many of the breeds of the present day were unknown. On the other hand, many of the breeds of today originated from some variety popular in our grandfathers' days.

From data at hand we learn that about 1850 there was a breed known as the "Bucks County Breed," it being a cross made by the poultry fanciers of Bucks County, Pennsylvania. Like all new breeds, it was claimed to be "a good layer, good setter, and good mother; the eggs large and nutritious; the flesh white, firm, tender, and finely flavored." It was also said to be the equal of the Dorking fowl, the pride of England, and at that time very much thought of by American poultrymen. In the States of New Jersey and Pennsylvania the breed was prized for caponizing, its weight running from 16 to 18 pounds to the pair.

From what can be learned the Bucks County Breed was bred in a variety of colors. Felch says they were buff mongrels, an extraction from Buff Cochins or Buff Shanghais on native stock. According to Bement (a well known authority of his day), he secured a pair which had different plumage. The color of the cock was a dark blue-black, with the ends of the feathers tipped with white; wings tinged with a yellow or golden color; hackles dark glossy blue; rose or double comb, and large wattles; bold, lively carriage and a stately walk. The hen did not differ much from the cock in color, and was very similar in form, being deep, plump and thick-set in body; short legs; medium size and dark color; high single comb, serrated, falling over to the side, and large wattles. It is plain that Mr. Felch knew what he said when he declared them to be mongrels, as they neither bred true to comb nor had a fixed color.

Originally, we are told, this cross was known as the Ostrich fowl, probably on account of its size, but later on it assumed the local title.

Even with all its shortcomings from a breeding standpoint, its fame spread, and it became popular in parts of New England. Mr. Bement secured the pair referred to from a gentleman in Boston. Dr. Kittridge, of New Hampshire, then more or less prominent in poultry matters, purchased some stock from a breeder in Montgomery county, Pennsylvania, but he said that at that time the variety was known as the "Booby fowl."

But the Bucks County Breed received its fatal blow when the Asiatic varieties became more generally known and pop-

ular. This was about 1860, and from then on we can find no trace of the cross.

Four varieties of the Asiatic family were known and bred in America about 1860, viz: the Cochin China, the Dark Brahma, the Chittagong, and the Shanghai. Prior to that, George P. Burnham, of Massachusetts, originated and bred what he called the Gray Shanghais, and in 1852 he sent nine of these birds to England, as a present to Her Majesty, the late Queen Victoria.

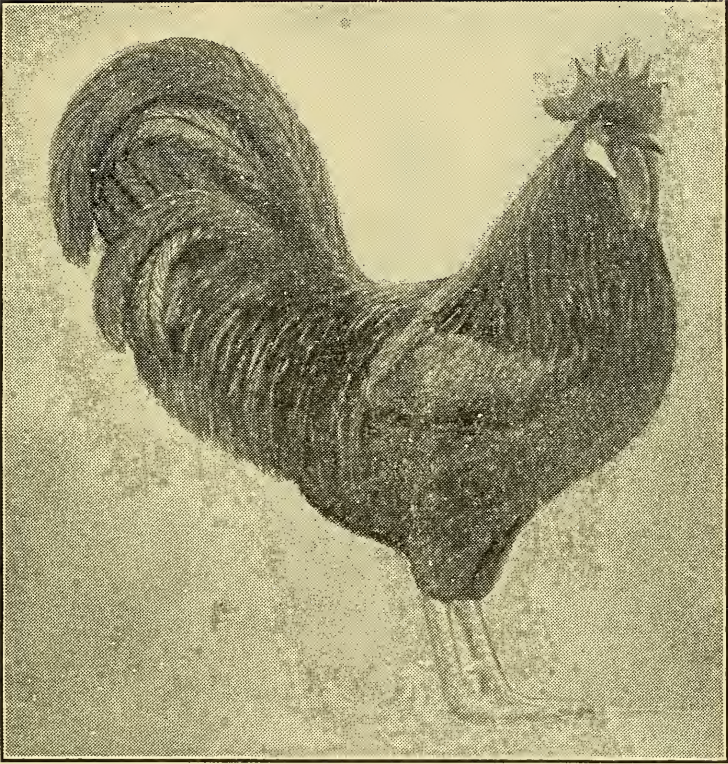
The impression, in some way or other, became general that the light Brahmas sprung from these Gray Shanghais, but that was a mistake, as in 1896, I. K. Felch exhibited at the Boston Show a stuffed carcass of a Light Brahma cockerel that came direct from England.

The following interview between the writer and Mr. Felch took place shortly after that show, and appeared in the *Farm-Poultry* of March, 1896:

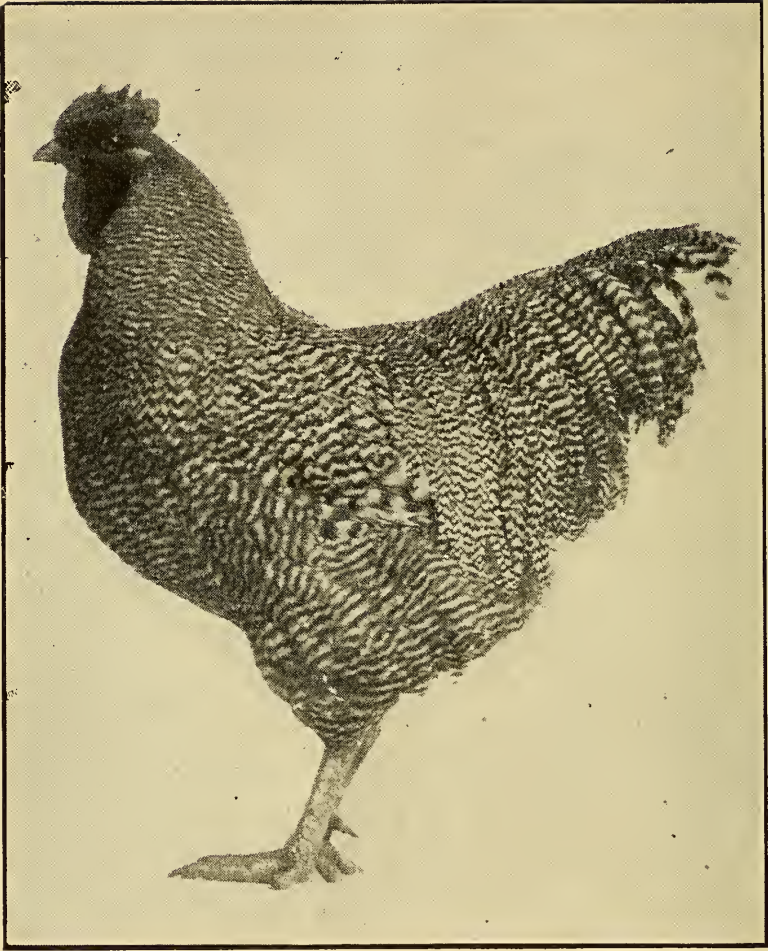
In reply to a number of questions, Mr. Felch said: "It will be remembered by those long interested in the Brahmas, that in 1863 to 1885, and later, there was quite a paper war as to the first Brahmas having pea or single combs—Mr. Burnham and the Kerr faction claiming that they had single combs. Thus were they striving to secure to the Gray Shanghai or Chittagong breeds the credit of producing the Brahmas. To keep in evidence the fact that the Chamberlain strain, the birds that Knox found in the India ship in New York harbor, in 1847, and their subsequent progeny, were pea comb, I had this bird set up, when some thirteen years old, although it was late, and the plumage all discolored and falling off. He was hatched in 1850, a descendant of those New York lot of birds, and when he was set up, the work made him so much of Game shape that we never took care of him. I bought the bird for one dollar, and sold thirteen of his descendants for thirteen hundred dollars. It is safe to say that, were there a truthful record kept, more Brahmas in the United States could trace their lineage to him than any other Brahma of the past times."

The Shanghai seemed to be in the front seat in 1860, but it was closely crowded by the Brahmas and Cochins. The Shanghai was then the largest fowl in the country, weighing as much as 22 to 26 pounds to the pair at maturity.

There was considerable controversy at that time whether the Shanghais, Brahmas and Cochins were varieties of the same class, or distinct breeds. Bement said they were different varieties of the same breed, claiming that fowls imported from



S. C. BROWN LEGHORN COCK
J. W. Leeman, Henderson's X Roads, Tenn.



BARRED PLYMOUTH ROCK COCK
Purl H. Weikal, Marion, Ind.

China, whether feather-legged or smooth-legged, whether dark or light in plumage, came either directly or indirectly from Shanghai or its vicinity.

The Chittagongs came next in line, and it must be said of them that they bred very uniform in both color and shape. At one time, too, it was said that the Hoang Ho fowls were the most valuable of the breeds of Asiatics, but we have so little reliable data regarding them that we cannot venture an opinion.

In the early sixties the White Faced Black Spanish were very popular throughout New Jersey, Pennsylvania and Ohio, noted for large, white eggs, and the number of them that they produced.

At the present day, with the exception of the Brahmas and Cochins, and with a limited number of breeders of Black Spanish, none of the old-time breeds are with us. And of the remaining breeds, the Brahmas, especially the Light Brahmas, are the only ones that have not only held their own, but are still forging ahead. The Cochins are less bred than they were ten years ago, and the Black Spanish variety is seldom advertised.

There is but one way to build up the utility of a flock and that is by proper selection. If each year the eggs from only the best layers are used for hatching purposes, each generation will become prolific; and this can also be greatly assisted by securing new males from some strain that have been likewise carefully selected. In this work of selection the trap-nest is the only reliable indicator.

CO-OPERATION IN MARKETING EGGS

IN THEORY it would seem easy for every community to co-operate in selling their eggs so as to get the very highest price. Poultry farmers do this in Europe, but Mr. Milo M. Hastings, recently of the United States Department of Agriculture says there is only one place in the United States where co-operation is practiced, and this is at Ruthven, Iowa.

Ruthven is a great farmer town. It has a farmers' creamery, a farmers' elevator, a farmers' bank, and numerous farmers' telephones and automobiles. The farmers' wives of Ruthven saw that the local merchants were not giving best prices. So they organized a shipping association of their own.

The association had twenty members, adopted simple rules, and shipped from four to five hundred dozen eggs per week. They tried to have at least one thousand laying hens and in as big flocks as possible. All members must sell no eggs except culls to outsiders. This was to keep the local merchants from breaking up the organization by offering temporary false prices. They ship temporarily, to a reliable commission merchant in the nearest large city. Every member must sell only fresh, large, clean eggs to insure success. After getting a solid reputation they send an agent to hotels, and fancy grocers to contract for a fixed price at so many cents above regular quotations. It is not necessary to add that the Ruthven association is a success. The wonder is that there are not thousands of them all over this country, as there are in Europe.—T.C.K.

MOULTING HENS

SUPPOSE we leave the “u” out of “moulting” and write it simply “molting” **for which there is the highest authority.** The “u” does no good and costs more to make it.

But how do you manage molting hens? Different poultrymen have different ways. Here is one who thinks it best to coop them up for ten days or two weeks and feed only one-third their regular grain ration. Then he gives them full run of the farm and raises their grain to full feed, adding meat or green bone three times a week and skim milk. By following this plan and keeping the house clean and free from lice and giving plenty of fresh water he gets his hens through all right by November.

Another would hasten through with molting by having no late hatches of chicks—none after June. He would also hasten the molt by plucking out the old feathers and feeding to the hens an abundance of nourishing food. Also he would feed sunflower seed which furnish a feather tonic.—T.C.K.

NATURE'S WAYS

HERE is a poultryman who wants us to follow nature's ways. He claims that fowls will be more vigorous and healthful by roosting in trees in the open air. Is he right? Consumptives are now getting well by sleeping out doors. It does look like there is something in it. And yet all our building of houses and modern improvements can't be a

mistake. The pith of the matter is to have pure air, whether in a house or out.

The wild birds sleep in the open air—at least most of them do. And they seem to be healthy. If they have diseases we don't know it. And they take their food in a natural way. They have no mashers and no prepared meat scrap. They pick up their food as they find it in nature. They work for it—hustle for it—and that gives them exercise and vigor. They chase the bugs and flies and scratch out worms from the ground.

Did you ever study a bird in his roosting habits? No; he doesn't sit out in an exposed place, but nestles in a clump of leaves or in the heart of a thick cedar top. This shows us the need of protection from cold and rain. He is protected, but still has air. So after all, houses may be right. They are for protection, but at the same time must afford plenty of pure air. When your hens desert the stuffy, stinking old henhouse these hot nights and fly up to roost in the trees, it is to get pure air and to escape heat. If we keep their houses well aired and cool they will not care to go into the trees.

The quail, or the ground-sparrow makes its nest on the ground in the thick grass. When the hen steals out her nest she does the same, and she brings off a vigorous brood, unlike incubator weaklings. Here is a suggestion to put soil in the bottom of the hen's nest. Round it out and line it with moss and feathers. That is like nature, to which the hen is adapted. In all our art and progress we want to keep close to nature. That will not be obstructive to progress, but in furtherance of it, and it is the only road to permanent success in anything.—T.C.K.

LATE SUMMER CARE

THE hardest period to get little chicks through is their babyhood, and many growers relax their vigilance when that time is past. Yet the late summer months require even more attention in some respects. The coops and houses must be cleaned more carefully while the heat is so excessive. More shade is necessary. A more frequent change of water is required and lice and mites must be more zealously combatted.

In August and September, the desirability of large, airy quarters becomes more clearly apparent. The air is more sultry and the bodies of the chicks have more than doubled in size and need more room. Crowded coops are often

responsible for a number of deaths in the heated season. Windows should be open, or at least protected with a thin muslin so as to admit plenty of fresh air. At the same time direct drafts should be avoided even in the warmest weather.

Hot weather is trying to the vitality of poultry and their vigor may be seriously reduced. Then they begin to droop and are much less resistant to the inroads of disease. The molting process is another strong draft on vitality and requires special attention to bring your layers through successfully, so as to start in promptly on the winter egg campaign.

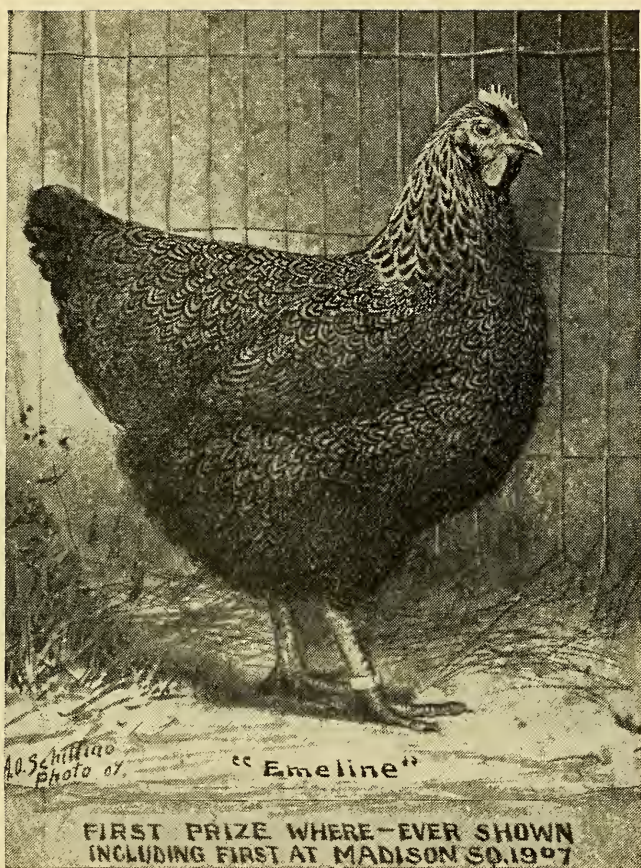
The different grades of fowls also should have separate roosting places so the young and less vigorous may not be crowded out and trampled down by the old and strong ones. They should especially be fed separately and in a way to give all their due portion without crowding and scrambling. It is the only way to keep the young stock constantly advancing and prevent masterful members of the flock from eating inordinately and unprofitably.

I know that farmers are prejudiced against separate runs and houses and think it a waste of time to provide such things, but in this they are mistaken. The different classes can be easily trained to know their places and go to them even while having the general run of the farm.

Yet, with a single house, different perches and departments may be easily arranged so as to overcome many of the difficulties of promiscuous crowding. The young chicks may have low perches and the older ones roost higher up. Fitness and an accommodation to conditions should be constantly studied.—T.C.K.

Ducks as a rule are hardy. They do not have gapes. The weakest part of a duck is its legs. Indigestion is apt to show itself in the young, if coarse sand is omitted in the food. It is always best to put a handful of sand in a pail of mash food, mixing it thoroughly. This will aid digestion. The oily nature of the feathers, makes the duckling vermin proof. Exposure to hot sun is fatal. There should always be a partial shade to the runs.

If there were more common sense and less doctoring applied to ailing hens, there would be less spread of contagion. When hens are kept busy they are as a rule kept healthy. Nip a cold in the bud, and there will be no need for roup cures. Keep the premises in a strictly sanitary condition,



PARTRIDGE PLYMOUTH ROCK HEN
Hillcrest Farms, Oakford, Pa.



PEN OF BLACK LANGSHANS
Miss Ona Waters, Lebanon, Tenn.

and you need not worry about cholera. Nearly all of the diseases that affect poultry are the effects of unsanitary surroundings, due to carelessness. In general, the treatment of the common diseases of fowls is not so satisfactory as preventive measures. Nowhere more than in the poultry business does that old adage apply: "An ounce of prevention is worth a pound of cure."

France classes the worth of a hen more for the production of meat and eggs than she does for fine feathers or Standard looks. Some years ago the poultrymen aimed for show records, and while they no doubt gained their point, they at the same time ruined the stamina and thrift of the hen for commercial purposes. Today it is different. Utility has taken a front seat, and all breeds are bred up to conform with the ideas of the market poultryman.

The best way to clean drinking fountains, which cannot be reached on the inside, is to use scalding hot water and a handful of shot. Fill the fountain about a quarter full of hot water, and then pour in the shot. Shake the vessel briskly so that the shot will scrape along the bottom and sides of the fountain. This will remove the scum and leave the fountains sweet and clean.

In giving medicine to a fowl, commonly speaking, what would be considered a dose for a child is about right for a fowl. A two weeks old chicken will need as much medicine in a day as a six months old child. At six weeks it would require the same size dose as would be given a year-old child; a half grown fowl as much as a two-year old child, and an adult bird as much as a four-year-old child.

It is claimed for the White Holland turkey that it is the hardest variety known, the most quiet in disposition, among the heaviest layers, quality of flesh surpassing all other breeds, early maturity, maturing the first season.

No successful poultry plant was ever established with mongrel stock. Dunghill fowls, like incompetent labor, are not worth having around. Thoroughbred fowls, like skilled labor, are sure to create a profit on the farm.

POULTRY PICKINGS

If you want a fowl that is practically free of disease, raise ducks. They rarely have any ailment, and especially after the first two or three weeks.

To know when to sell and when to buy serves a good purpose in the poultry business as well as elsewhere. To have a good knack at trade is a fortune to some men.

Feed is high, but so are eggs, and so is a good fat hen. Remember that profits always increase proportionately as prices go up. You don't make your money when prices are down.

Just as in other stock, there is most money in chickens that fatten quickly when you want to prepare them for market. They take less feed in the end.

If you have a good incubator, fill it up while eggs are cheap and raise broilers for Christmas. In the great cities broilers are now in demand the year around.

Do you know what is the most valuable manure on the farm? It is the droppings of your hens. This should be counted in the profits always.

WHAT GRANDMA SAYS

To get eggs you must feed your hens, and clean oats are a better diet than common sawdust.

That hen is all right who has a plump red comb and who goes singing around the yard in early morning hours. There is certain to be a big egg in her nest before night.

Don't baby your hens by keeping their houses too close and warm. We are told that a world-record hen some years ago roosted on top of a coal-house.

During the molting season give your hens rich food and plenty of green truck. It takes protein, as these scientific chaps say, to make a new coat of feathers.

When you want to fatten your hen, put her in a coop and pour in the feed. To have her gallivanting over the farm to get her meals will take fat off instead of putting it on.

It pays to raise only pure-bred poultry, but don't invest too much in prize-takers till you feel sure you are in the business to stay.

The critical period in the young turkey is generally at an end when six weeks of age. Inbreeding, lice, dampness and improper food are the main causes for great mortality.

THE GUINEA FOWL

The Guinea hen is a good layer, but, on account of the wild, gamey flavor, the eggs have never had an extensive sale for table use. However, to turn these eggs into young broilers or roasters, a considerable profit will be derived. The flesh is the nearest substitute we have for the wild game.

The Guinea is of a roving disposition, and one of the best known destroyers of insects.

The laying season starts in early April and continues until October, the hen laying as many as 120 eggs in a season. In the early part of the season it is not advisable to let the Guinea hen hatch a brood, as she is of too restless a nature, and will not give her young the proper attention. But after the first of July, on account of the warm weather, she will be more quiet, and she can be safely entrusted with a brood.

It requires four weeks to hatch out Guineas. The hen always hides her nest, and that too in some very obscure place. As they come off the nest they give a shrill cry, and in this way their hiding place can be detected. All the hens of a flock are apt to lay in the one nest, and in taking away these eggs they should not be touched with the hands, for if the hens discover that the nest has been touched she will desert it and hunt another place. But if the eggs are removed with a stick she will not leave the nest, even if the eggs are taken out nearly every day.

It is claimed that a cross of the Pearl and White Guineas will produce a carcass closely resembling that of the English Grouse. If rightly cooked, the meat of even an old bird will be tender and delicious, while that of the young bird is unsurpassed as a broiler or frier. The dressed Guinea has a round, plump body, good sized breast, and small bones.

Guineas will pair if the sexes are equal. They generally lay between the hours of 10 o'clock in the morning and 2 o'clock in the afternoon. Until well feathered, young Guineas are delicate and tender. It is not advisable to hatch before June. The Guinea cock bird cares as much for the young as does the hen, guarding them during the day and hovering them at night.

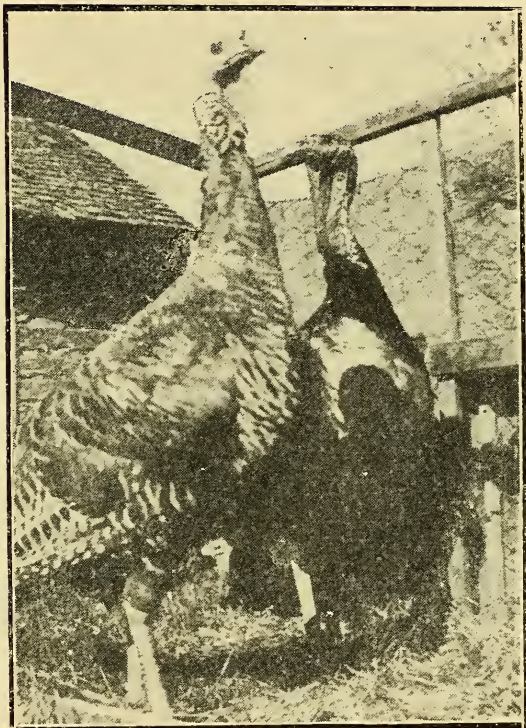
The male bird is larger than the female, is more aggressive, and has a different call. The hen makes a noise sounding like: "Come back, come back!" while the male

gives "tick, tick!" The cry of the Guinea is one of warning to the rest of the poultry, and they at once hide until the alarm ceases.

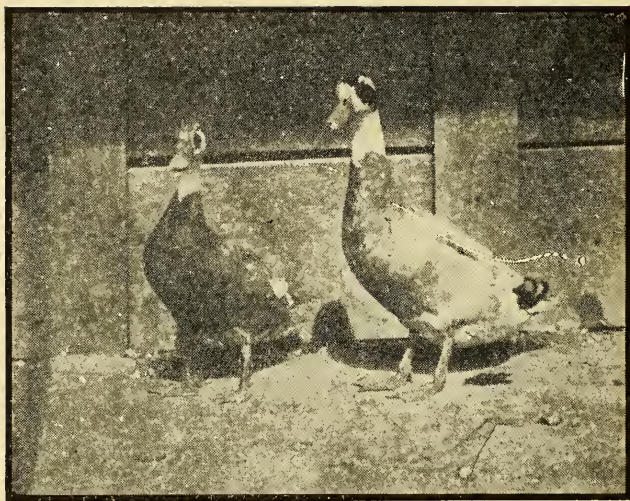
Guineas do not scratch like other fowls, and therefore are safe to have in a garden. They should be given their freedom, as they do not thrive in confinement.—MICHAEL K. BOYER, Hammonton, N. J.

"How many hens should be placed in a pen with a male bird for good fertility?" That question is asked time and again by beginners, and it might be interesting to note the differences of opinion. Holmes says the best results can be obtained both in fertile eggs and vigor of chicks, by having two males for each pen, and using them alternate days. If one has but a few hens, say a half dozen or less, better allow the male with them but a half day at a time. Professor Wheeler says some of the best results in fertile eggs and good hatching that he has ever had, were ten hens mated with a year-old male. The hens were in three pens, four in one, and three in each of the others. The male was in each pen one day in three. Stevenson says he always had the best results for fertile eggs when he kept about 30 to 40 hens in one pen, and kept two vigorous cockerels, allowing only one of them with the hens at a time, keeping one in a coop arranged for the purpose, and changing them every day. Mount prefers using enough hens for one cock in each pen. With the small, active breeds, such as Leghorn, Minorcas, etc., twenty hens for one cock are about the number, and with the larger breeds, such as Wyandottes, Plymouth Rocks, etc., fifteen hens to one cock. With Brahmas and the very large breeds, ten hens are enough for one male. Speaking of fertility, Fred Grundy says small, penned-up flocks, comprising six to twelve females and one male, will give 60 to 80 per cent of fertile eggs, and strong chicks, for 15 to 25 days at the beginning of the season. After that the per cent of fertility decreases rapidly, and the chicks are invariably weak, and never make good, vigorous breeding fowls. It pays well to have two male birds for each pen and alternate them. It is a practice the writer has used in his yards for years with marked success.

The following recipe for carbolated kerosene emulsion, it is said, is not only a vermin killer, but also imparts an odor to the hen house that is offensive in the cure of cases of bad cold and discharges of mucous substance from the nostrils: Half pound ordinary laundry soap, one gallon



PAIR OF BRONZE TURKEYS
Miss Ona Waters, Lebanon, Tenn.



PAIR OF INDIAN RUNNER DUCKS
Clayton I. Ballard, White Pine, Tenn.

water, one quart kerosene oil, four ounces crude carbolic acid. Cut the soap in small pieces, and drop into the water and boil. When it comes to a boil remove from the fire and add the kerosene. Shake or stir the mixture until nearly cool. Put away in a well covered vessel until wanted, at which time add about 12 to 14 quarts of hot water and the carbolic acid, and mix well. Use as a spray once a week.

While it must be admitted that no incubator is able to do as good work as a hen, yet in hatching large quantities of eggs it would be too expensive to rely solely on hens. A machine is ready when broody hens are very scarce, and if run properly, the machine will give almost as good a percentage of strong chicks as will hens. But much depends upon the work of the man in charge. Hens cannot always be relied upon. At times they give up the notion in the midst of the hatch; some hens impart too much heat, and some not enough. Some hens are restless and break eggs, and many more things are apt to go wrong at a critical time. Both hens and incubators need watching.

Some years ago, A. J. Hallock, of Long Island, one of the most extensive market duck growers in the country, kept a record of the growth in weight of ducklings from shell to market. He found the following average weights: Half out of the shell, 2 3-4 ounces; all out of the shell, 2 1-4 ounces; one week old, 3 ounces; two weeks old, 5 1-2 ounces; three weeks old, 7 1-2 ounces; four weeks old, 1 pound, 3 ounces; five weeks old, 2 pounds, 6 ounces; six weeks old, 3 pounds, 12 ounces; seven weeks old, 4 pounds, 12 ounces; eight weeks old, 6 pounds, 2 ounces; nine weeks old, 7 pounds, 4 ounces; ten weeks old, 8 pounds; eleven weeks old, 9 pounds, 3 ounces.

The Indian Runner duck is not inclined to fatten so readily as other varieties. Its name originated from the fact that this duck has a running rather than a waddling motion. In color it is a light brown or fawn shade and gray. At the joining of the head and bill there is a narrow band of white. The legs are orange. In carriage it is erect, with a long, narrow body, well elevated in front, and closely feathered. The neck is long and slender, and the head rather flat. The bill is long and broad.

THE INCUBATOR

IN the imitation of anything, it is vastly important to secure the object just as nearly like the original as possible. For instance, we visit the millinery shops in the Spring and Summer season and are attracted and even astonished at the gorgeous beauty of the artificial flowers there on display, these vying with nature in beauty. The manufacturers of this product clearly understand that it is of the utmost importance to imitate nature just as closely as possible.

Until the poultryman can get just this thought deeply imbedded in his mind, it will be impossible for him to have the best success with artificial hatching and rearing of chicks with incubators and brooders.

Above all things let us study the mother hen carefully. First. You let the hen select her own place to set and she invariably selects a cool, shady place, where she will not likely be disturbed, and above all things she centers her whole thought and being, so to speak, on that one object of hatching from those eggs entrusted to her care.—Such a lesson we can learn here.

We often have the idea that after we place the eggs in the machine our further responsibility is only getting the eggs turned twice a day, and filling the lamp once each day. Now, to properly hatch chicks we must be ever with them, giving them every care possible, for they cannot take care of themselves.

Before starting the incubator, as well as between each hatch, the incubator must be thoroughly cleaned and every part sunned in order to eliminate every possible particle that should not be in there.

After this process, start the lamp with a medium flame and don't be impatient for the machine to heat too quickly, for after being idle for a time, each particle must become thoroughly acquainted with the new surroundings of heat, and be very sure not to place your eggs into the machine until you are thoroughly satisfied with the way the machine is running. Many a failure has been caused by nothing more than impatience. Having now selected choice eggs from the most healthy and vigorous breeders, and having gotten our incubator in good running order we are ready to start.

The eggs should be placed in the machine, the machine closed and allowed to heat to the proper temperature, 103°. It may take more time than you think it ought, but never-

theless, leave it alone to heat. If everything is O. K. it will regain the original temperature.

At the end of the seventh day you can safely take out all doubtful eggs and have room to handle the others better.

Much discussion has been indulged in regarding moisture, its effect on incubation, etc., with its advocates on one side and its enemies, as they may be called, on the other.

The hot-air machine has staunch advocates, but regardless of this, a careful and practical experiment will demonstrate to you, as it has to us in our personal experience, that some moisture is absolutely necessary to the successful exclusion of the chicks.

Again to nature, we find in the make-up of the hen's body an enormous percentage of water, and with them as with the human body, where there is intense heat there is more or less moisture.

The "hot-air" advocates claim that the hen does not have water under the eggs when she sets on them.

So she does not, but she does have moisture in her body and that moist heat is delivered to the eggs by contact. You put your hand under a setting hen against her breast and you can easily feel the moisture.

If you are running a hot-air machine, even if you are getting good hatches, try placing a couple of damp flat sponges on the bottom of the machine and note the difference in the percentage of the hatch. Not so many die in the shell. Those hatched look stronger and healthier and are more vigorous and will grow off more steadily. A careful experiment will convince you.

Do not allow too much air current in the egg chamber, for the moisture in the eggs will dry out quickly and leave the shell tough and hard to break, leaving a large percentage of the chicks to die in the shell, and those hatched will be weaklings.

When the egg is first placed in the machine it has no temperature whatever, but when the egg is left there a short while, circulation begins, even in a very minute way, for the very first process in incubation is the development of some tiny blood vessels, which grow day by day, increasing the circulation little by little, causing a greater amount of animal heat, and on with the development of the embryo until the natural temperature is reached at the time of exclusion.

Above all, follow nature. Work hard. Never give up

Faithfulness, vigilance, persistence and **hard work will indeed be rewarded with fine hatches and better, stronger chicks.**—J. A. THORNHILL.

CHICKLETS

Young chicks should be kept somewhat **hungry rather than incur risk of overfeeding, especially if they are taking little exercise.**

Beware of millet as a chick feed. It takes the hull a long time to soften which makes the seed hard to digest and gorges the crop.

It is useless to expect success with incubator and brooder chicks without a thorough understanding of the best way to feed and care for them.

If brooder chicks get chilled keep up the heat and give light feed for a few days. With proper caution on this line they will soon come around all right.

Protect your boarder chicks from cold, wet weather if you don't want them to have bowel troubles. See also that they get nourished with plenty of mineral salts.

Green food supplies mineral salts. The difficulty is the small amount of salts to bulk of food. Yet a little green food keeps the blood cool in hot mid-summer weather.

Chick food should be selected with a view to a good supply of mineral salts. If not obtained in the food, the deficiency may be made up in some artificial preparation.

HERE AND THERE

In market your eggs should weigh at least 24 ounces to the dozen and be assorted according to color and size.

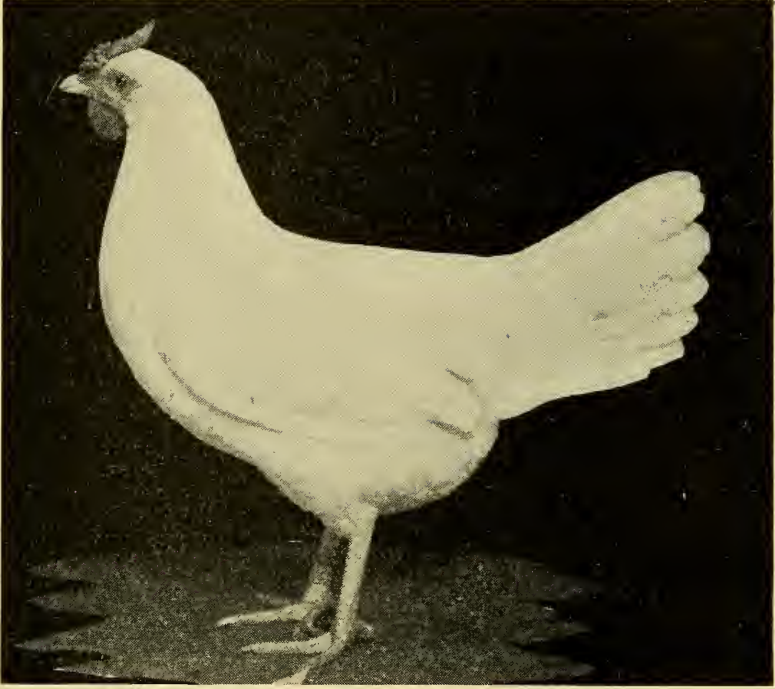
It will soon be time to cull out all old hens and install pullets in their places to keep up a good supply of winter eggs.

Choice customers in the great cities would give almost any price for eggs only one day old if they felt sure of them. How can we make them sure?

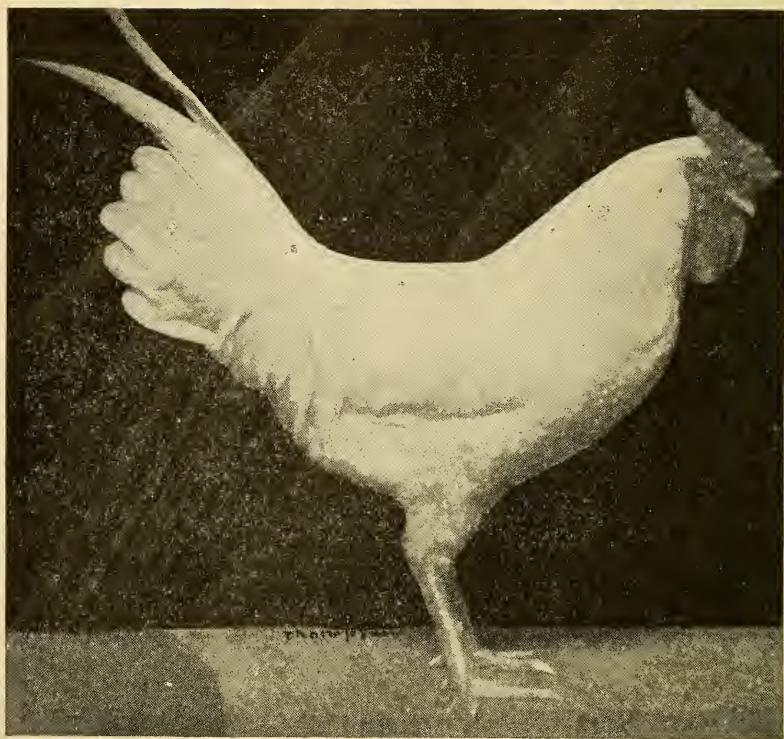
That the beginner should confine his efforts to one breed is an old injunction but a wise one. It will not pay to have your attention too much divided.

Eggs are the foundation of all poultry production. A few people place form and feathers first, but they do not measure up with the rest of mankind.

After all, those early laying pullets **do not always turn out best.** They sometimes take a vacation during the winter.



R. C. WHITE LEGHORN HEN
Hon. Sam M. Cooper, Fountain City, Tenn.



R. C. WHITE LEGHORN COCK
Hon. Sam M. Cooper, Fountain City, Tenn.

THE HOUDAN

THE Houdan is of French origin and is bred to a large extent in France and many other sections of Europe. They were first introduced into America about forty years ago and became quite popular in a brief time.

During the sojourn of this breed in this country it has become in a way Americanized and has lost much of its ancestral identity. The old cuts of the Houdan that the writer has seen were truly hideous and some of the later-day drawings and stock cuts are a disgrace to the breed, whose beauty is one of its greatest attractions.

The modern Houdan when properly bred may briefly be described as follows: a squarely built fowl of the Dorking type, a fairly long body, with broad back, shoulders and saddle, with a slight sloping of these sections toward the tail, which should be carried rather low. The breast should be broad and full, this feature being an indication of the qualities of the Houdan as a table fowl. The fifth toe, too, gives style and finish to the breed and is one of its hereditary characteristics from the English Dorkings. This is a very important feature from a fancier's standpoint, since the absence of this fifth toe, or, as is sometimes the case, the presence of a sixth toe, are disqualifications of the breed. Then there is the crest, that large, full bunch of feathers growing out of a protuberance on the head and the beard which is pendant from the lower part of the face. The crest and beard when properly proportioned with black and white are the most pronounced characteristics which distinguish this breed from other breeds.

In plumage the Houdan is black and white in the proportion of three solid black feathers to one tipped with white. This is a correct Standard marking, but is never attained throughout the fowl. Some sections occasionally show an almost correct marking and may be passed as practically perfect. The white markings should be evenly distributed. Large patches of white are objectionable and the white should be clear and distinct with no mixture of the white and black. Black should be predominant in wings and tail, although clear white edged feathers of primaries in wings and main tail feathers is not objectionable.

In regard to color, our selection of breeding stock is in favor of the darker specimens, as there is a tendency of

the breed to get lighter at each moult, although some specimens show a predominating black at an advanced age. If two year old hens of Standard color are mated to a very dark cockerel the result will be good marked birds of both sexes. We would not advise the selection of extremely dark birds of both sexes for mating, as that would tend to eradicate the white altogether, which is considered a part of their beauty well worth retaining. Perfectly dark birds are one extreme and those mostly white is another, and it is between these extremes we find our most perfect plumage.

The Houdan is somewhat low in feet and the legs set wide apart, which is an indication of their laying qualities.

Now when it comes to the practical qualities of the Houdan, we have been accused by some breeders of undue enthusiasm, that being a mild way of telling us that we were misrepresenting the breed as to its practical qualities. We have no quarrel with anyone about this matter, because our enthusiasm is honest and is verified by hundreds of others who like us have formed an attachment for a breed of fowls that is both beautiful and useful.

As to the practical qualities, the Houdan has in our hands proved itself a greater layer than the Leghorn, both in winter and summer. We find they lay well up into the moulting season and quit laying only for a short time while the new feathers are forming. Unlike the Leghorn, the Houdan hen has practically no comb and wattles and are very heavily feathered, two very essential qualifications for winter comfort, and those things which are conducive to the comfort of any fowl are certainly favorable to egg production. With these things in their favor, the Houdan, if given an egg producing ration and well lighted, clean and well ventilated quarters, will produce large white eggs in plenty, and as they are non-sitters the egg supply is kept up through spring and summer and only ceases at the moulting season or when the new crop of feathers is coming on and nature demands a short rest of the reproducing organs. About November or December our Houdans begin laying again and under the aforesaid conditions of feed, light, etc., they continue to give us a bountiful supply of eggs when eggs are at a premium.

The Houdan egg is an ideal one for the market, being large size and white in color, but right here I wish to state that I have never sold a well shaped Houdan egg on the

market, as the demand for them for hatching the entire year is more than I can supply. When the climate is favorable to hatching and brooding chicks the Houdan being an active fowl, the eggs are highly fertile and the percentage of the chicks hatched is usually good.

As to the table quality of the Houdan, we find they have no equal. Being of small bone, they have a plentiful supply of fine grained meat of a delicious flavor. For further proof ask the Frenchman, or, better still, try one on your own table.

The Houdan is fast coming into a very deserving popularity and there are many other things I might say in evidence of their practical value. There have been claims made against the Houdan by some persons that they are delicate and hard to raise. These claims are no doubt based on the fact that this breed has in many cases been promiscuously inbred and a start from such stock is sure to be disappointing. This is the case with any breed of fowls as well as throughout the animal kingdom. Intelligent line breeding seems to give good results, but when done in a haphazard way without system the results are always detrimental to the breed.—DR. G. W. TAYLOR.

In feeding for fat, it is necessary to give more than can be converted into life and energy, and the surplus is deposited in the form of fat in the gizzard, intestines and under the skin. But if this fat feeding is carried beyond needs, the result is a diseased fowl, consequently very few eggs. This diseased condition is caused by the hens eating too much carbohydrates to balance the proteins. Like humans, fowls like and require a variety of food stuffs, for the reason that they can assimilate from the various substances the flesh-forming, energy-producing, and the mineral matter necessary to maintain the normal equilibrium of the body.

For the production of broilers and medium-sized roasters, no varieties of fowl excel, if they equal, our American breeds. The bulk of buyers want a fowl that weighs ten to eleven pounds to the pair, or about five pounds apiece.

Again we say, don't feed much corn during the hot weather. It is fattening and gives too much heat. The same for buckwheat.

ITEMS OF INTEREST

While still young, but full grown, the chicken is best suited for food. As it grows old, the flesh loses its flavor and increases in toughness.

Here and in Europe, poultry consists of chickens, turkeys, ducks, Guinea fowls, pigeons—and sometimes peafowls, pheasants, quail and swans.

There is no legal limit fixing the division of chickens into different classes with respect to age, the only criterion being the price and taste of the consumer.

If you want to become thoroughly successful in poultry raising, commence at the bottom of the ladder, and don't make your first venture at a dizzy height, that poultry height, that poultrymen with years of experience have not yet attained.

The eggs should be gathered daily and marketed twice a week. The life of the fresh egg is three days. One bad egg may lose a valuable customer; send all "doubtful" eggs to your own kitchen. Each day date the eggs laid so that the age can be guaranteed.

Pure cottonseed meal is made by grinding the seed after the white down, which remains upon the seed as it comes from the cotton gin, and the hard hulls, have been removed. Thus prepared cottonseed meal may carry from forty to fifty-three per cent. of protein.

Good mottoes to remember: The time for culling is always at hand. Avoid filth and encourage neatness. The flock should consist of well bred fowls. Too much care cannot be exercised in selection. A natural love for anything is a great influence towards success.

The incision in a drawn fowl readily admits molds and germs of different kinds to the body, where they find ideal conditions for rapid multiplication. The cavity is dark, damp, and not easily accessible, and frequently a drawn bird which outwardly appears all right, is really unfit for food.

There is a profit in raising Guineas. Their eggs are as good as hens' eggs, and their flesh has the flavor of wild fowl and is popular with epicures. They are no harder to raise than turkeys, and will glean a living from orchards and fields. The White Guineas are preferred, as they are peaceable and more domestic in their habits than the Pearl variety.

At one time there seemed to be a move compelling poultrymen to draw all fowls dressed for market. From the start it appealed to us as a dangerous act, and it is grat-



WHITE PLYMOUTH ROCK COCK

Bred to Standard requirements by U. R. Fishel, Hope, Indiana, a leading authority on White Plymouth Rocks



WHITE PLYMOUTH ROCK PULLET

First at Illinois State Fair, and possessing all Standard requirements. Bred
by U. R. Fishel, Hope, Indiana.

ifying to know that experiments have since proved that it is a very unwise act. Opening the body and removing the viscera undoubtedly exposes the internal surface to the air, which always contains micro-organisms, and thus invites decomposition.

Poultry farmers are plain people. As a rule they are not college-bred. Therefore much of this scientific talk about balanced rations and other matters we find in books written by "highly educated" professors, finds very little "fertile soil" in the minds of these plain, honest, working farmers. Their knowledge of the feed question is that wheat, oats, barley, and occasionally buckwheat, make eggs; they know that all grains, corn is the best for fattening; they are also acquainted with the fact that bran, middlings, cornmeal, ground oats and meat scraps make the best composition for a morning mash, or when they find that the bowels of the fowls are loose they increase the amount of middlings and reverse the order when they find that there is a tendency to costiveness. These plain, hardworking people also know that green food is a necessary article in the poultry bill of fare, and that it must be given while the fowls are in confined quarters, and not necessarily while they have free range. They were taught the lesson long ago that grit for grinding, and oyster shells for lime for making egg shells are necessary adjuncts to the diet. Now these folks have come into the possession of all this knowledge without being compelled to wade through a lot of scientific lore which would be very apt to confuse them.

The poultry medicine chest should contain: a box of one-grain quinine pills, a bottle of a reliable liniment, a box of carbolated vaseline, a bottle of tincture of aconite, a box of a good family liver-pill, a bottle of glycerine, and a bottle of spirits of turpentine. There should also be a can of kerosene oil within reach.

The Houdan fowl may be termed the Queen of the French Farmyard. It not only has an elegant carriage and form, and a gay and enticing plumage, but it also has all the practical qualities that one could wish in a fowl. It is a good layer, easy to fatten, and their flesh is of a delicate flavor.

POULTRY NOTES

Fat hens, it is true, are not the best egg producers. Neither are half-starved hens a success in this line of the business.

Frizzles, Malays and Malay Bantams, Buckeyes, Buff and Slate turkeys, and Egyptian geese are to be left out of the new Standard.

With a small flock poultry manure may be collected in an old barrel where it is mixed with dry earth. In England it brings \$12 per ton.

Whitewash chick-feeding coops and change location frequently during this hot weather season. It is hard to be too careful about cleanliness.

I like guineas on the farm. There may not be much money in them but their "potrack" clatter has a cheerful sound to me.

Talking of things that pay, I get tired of the whole mess of money grabbing. We used to live well and happily on the farm without any bother, whether eggs brought five cents or twenty.

I believe in having geese, too, even if feather beds are out of fashion. A baked goose comes in mighty nice now and then, and I am told there is a big demand in the large cities.

My plan is to have all kinds of fowls and other good things on the farm, whether the market is up or down. City folks are not the only people who have a right to the good things of life.

They say incubator chicks are dying off mighty fast. No wonder, for I never did know anybody to succeed who set himself up above the natural way of doing things.

You want a rooster that is polite to hens and popular. He walks off, proudly handing out bugs and worms with a cheerful call to the flock around him. I have known a good rooster to nearly starve himself out of pure generosity. He should have a side dish when off duty.

Keep the sexes apart till needed for breeding purposes. This will insure greater fertility of eggs and infertile eggs keep better for market purposes.

A nervous hen can not be relied on for a good setter. The

chances are that she will get excited when the chicks come out and leave the nest prematurely.

Keep plenty of shade and green food all through the hot months. Also keep the dust boxes full and the water vessels supplied with pure fresh water.

To keep rid of disease and vermin the fight must be constant. Sulphur is about the best thing to keep off lice and wise care and feeding will prevent disease.

Beware of overcrowding young chicks, or any other. There must be plenty of room in the brooder, on the roost, and in the range. This is why small flocks succeed.

To have early winter eggs, put your hens through the molting period before summer is over, while eggs are cheap. A fast of two or three weeks followed by rich feeding does the work.

The Maine Station says it didn't do any good by breeding from the best layers. Something wrong with the Station, I fear, for everybody knows any sort of stock is improved only by breeding up.

They now say that Golden Leghorn pullets lay at four months old and that cockerels make one-and-a-half to two pound broilers in six to eight weeks. May be so, but that's a little faster than anything when I can first remember.

Some years ago Henry Van Dresser, before a Western Farmers' Institute, told how to get rid of surplus poultry when prices were very low. He said that all should join hands and have a killing day. Put a large pot on the stove, kill and dress the birds, put them into the pot and boil until tender. Have Mason jars ready and fill with chicken, pouring the juice on top, cover with fat or melted butter, and seal while hot. It will keep through the year and then can be prepared in many different ways for the table. It makes a convenient dish for unexpected company.

Corn firms the meat.

Close grained poultry is most desirable.

Pure food improves the flavor of the meat.

First grow bone and muscle, and then put on fat.

It takes about eight weeks to grow a squab boiler.

Dark pin feathers give a dirty appearance to a dressed carcass.

Unless the animal heat is all out of the carcass before packing to ship, there will be a discoloration of the skin.

WIDE AND NARROW RANGE

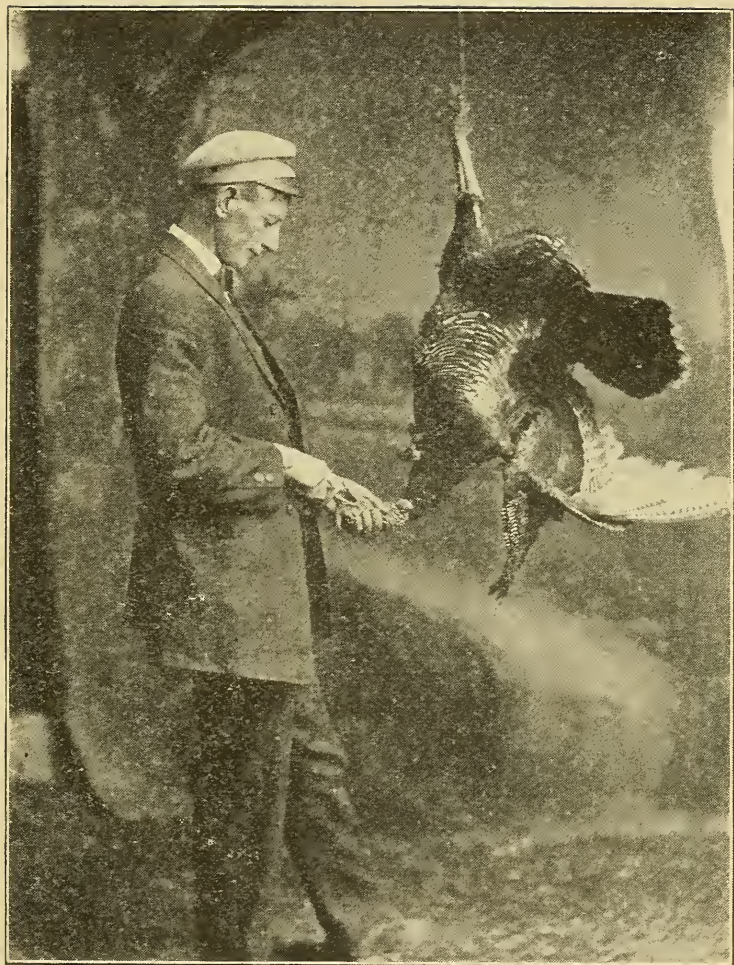
It is evident that the last word has not yet been said on the subject of poultry culture. When leaders differ radically with regard to foundation principles, we must think there is yet much to be learned and that so far we are only in the primary class. These reflections come from reading a very thoughtful article depreciating the desirability of wide range for fowls. The writer of the article contends that his experience favors limited range, but confesses that it has not been sufficient to be conclusive. The truth is that the results in these complex questions have such a varied origin that it is very difficult to disentangle their causes. It may be that certainty never can be determined. It may be that often both ways are equally good. One need not necessarily contradict the other except in so far as the producing factors oppose each other. It is evident that a wide range belongs especially to the farm and will be more successful than a narrow range when there is little feed and care. The fowls then can better make up for deficiency by looking out for themselves than if confined to a back yard in the city. The difference of range doesn't effect so much as the difference of food and care. If these are supplied by the owner in a scientific and natural way, the flock on the city lot may come out as well as those having wider range on the farm. The secret of the whole matter is that circumstances alter cases.—T.C.K.

FRESH EGGS PAY

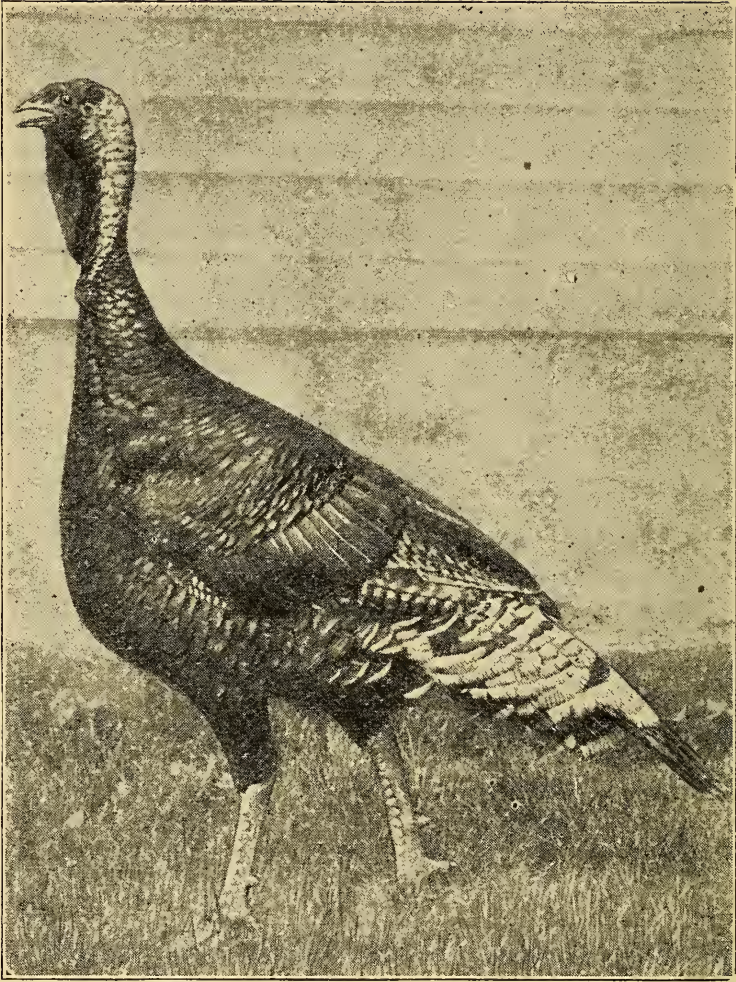
The price of eggs has kept up remarkably well during the summer, and in fact all the year. This comes largely, it seems, from a desire on the part of consumers to have none but fresh eggs. The public taste is improving rapidly. People are coming generally to see that it pays better to give a good price for eggs that can be relied on than to buy those that may be half bad at any price.

How are we to get fresh eggs to the customer? By dealing with him directly, or selling to a dealer who does, and by selling without delay. Another and most important point is to keep your hens from mating when laying for the commercial market. Infertile eggs will keep for weeks while fertile ones in hot weather spoil in a few days.—T.C.K.

Chickens need shelter but turkeys do best in the open air. To be healthy they should roost on high trees especially in our mild Southern climate.



MR. GEO. SINEAS, New Castle, Va
In practical demonstration work of dressing turkeys
for market.



MAMMOTH BRONZE TURKEY
Mrs. J. C. Shofner, Mulberry, Tenn.

MAMMOTH Bronze Turkeys FOR SALE

Old and Young Stock from two magnificent flocks, mated for largest size and best plumage. When buying, be sure you buy the best. My breeding toms for six years have weighed from 48 lbs. to 50 lbs. at eighteen and twenty months old. Won many prizes in the leading shows, scoring from 96 to 97½ points. I can furnish you young stock that will grow that way for you. Do not delay buying your breeding stock early. EGGS IN SEASON

Barred Plymouth Rock Chickens

AND EGGS from best prize winning blood.
For further information, address

MRS. J. C. SHOFNER

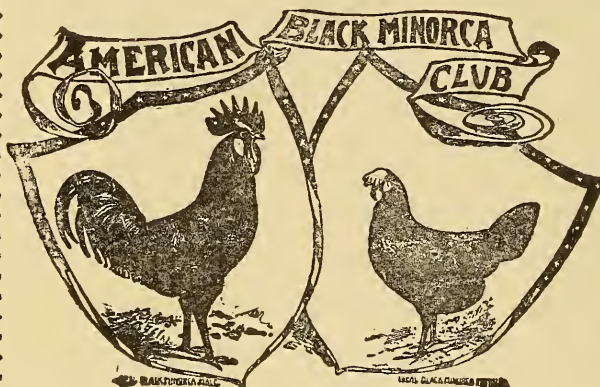
R. F. D. 1

Mulberry, Tenn.

When Writing Advertisers, Mention "HEN AND CHICKS."

BLACK WHITE MINORCAS

Single Comb Exclusively

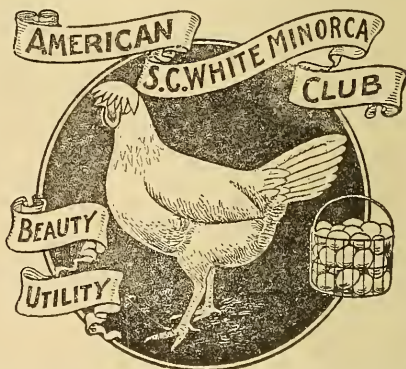


*By Their
Winnings
They Have
"Quality"
Stamped
All Over
Them*

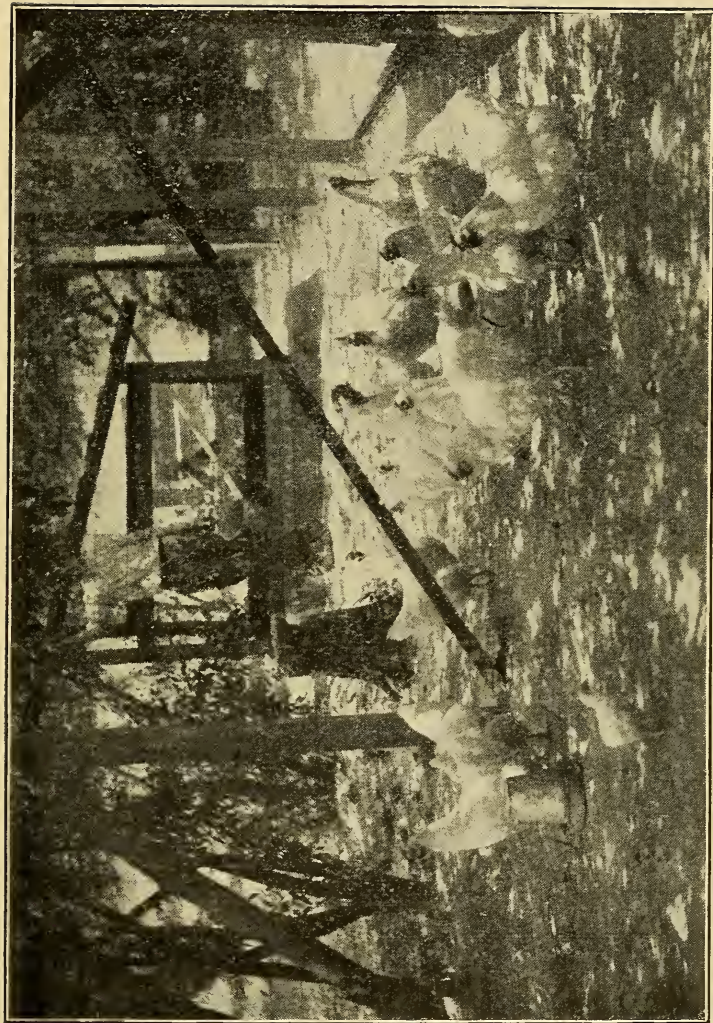
My winnings last season at the Tennessee State Fair, Appalachian Exposition and Lebanon, where I won more blue ribbons than all competitors combined amply demonstrate this fact. My **Black Minorca** stock is originally of the Northup Strain and has been improved since by the introduction of new blood from the yards of the country's most noted breeders. In **White Minorcas** I have the best to be found anywhere. They stand foremost among the good birds of the country in this variety and remain undefeated in the show room. You make no mistake when you order stock or eggs of me, as I ship you the best values for your money.

*Stock for Sale and
Eggs in Season*

MRS. JNO. M. GRISSIM
DRY BRANCH POULTRY FARM
LEBANON, TENN.



When Writing Advertisers, Mention "HEN AND CHICKS."



CRYSTAL WHITE ORPINGTONS.
Bernice Poultry Block, Bernice, La.

We Breed EXCLUSIVELY

Single Comb

Crystal White ORPINGTONS

8—GRAND PENS—8

“Bred to Lay” because we use trap nests.
Write for mating list, which gives prices
on Eggs and Stock.

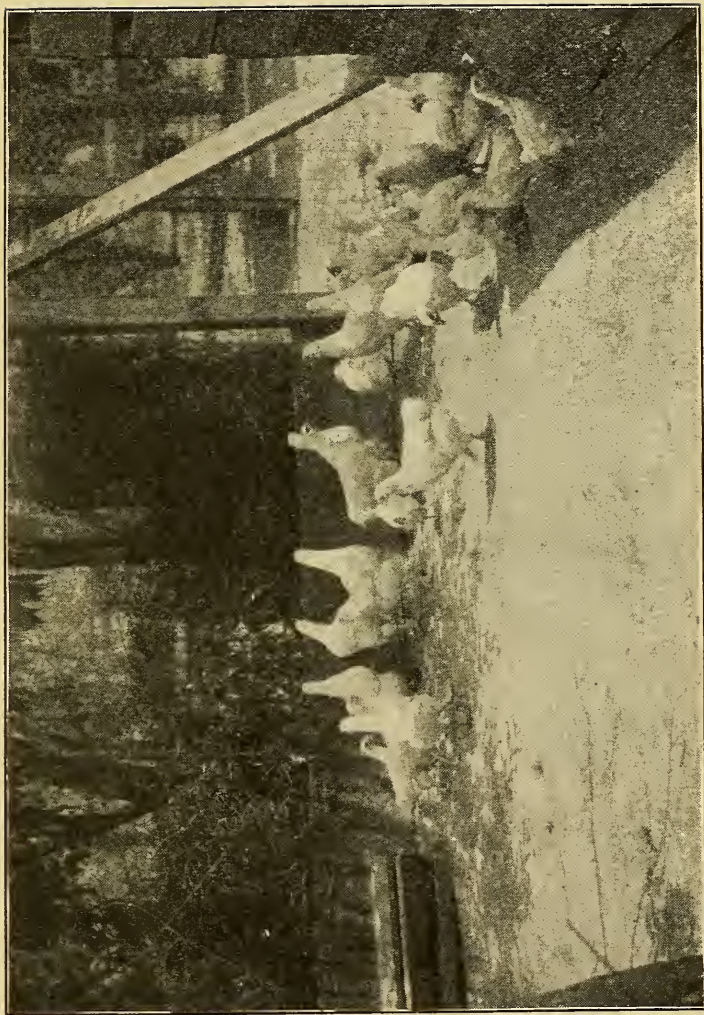
Baby Chicks a Specialty

Bernice Poultry Block

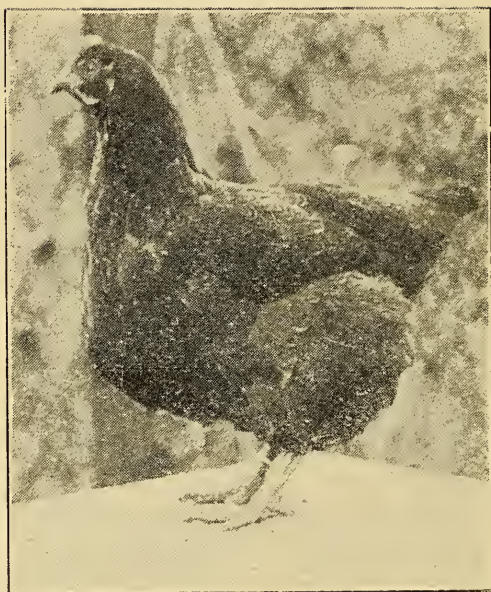
T. E. Newton, Prop.

BERNICE, LA.

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CRYSTAL, WHITE ORPINGTONS.
Bernice Poultry Block, Bernice, La.



PARTRIDGE ROCK HEN
G. W. Sybert, Madisonville, Ky.

ORPINGTON GROVE



**BUFFS
BLACKS
WHITES**



Birds of each variety won in every show at which they were exhibited.

The Great Appalachian Show,
Knoxville, Tennessee, 1910
Augusta-Carolina Show,
Augusta, Georgia, 1910
Philadelphia Show,
Philadelphia, Penn., 1910
Georgia Poultry Show,
Atlanta, Georgia, 1911

Stock and Eggs for Sale. Send for 1911 Mating List

MRS. LOUISA L. UPSON
1124 Prince Ave. ATHENS, GA.

Life Member of A. P. A.
State Vice President American S. C. White Orpington Club.
Member of National S. C. Black Orpington Club.
Member of National S. C. Buff Orpington Club.
Secretary of The Southern Poultry Association.

When Writing Advertisers, Mention "HEN AND CHICKS."



CRYSTAL WHITE ORPINGTON HEN
East End Orpington Yards, East Falls Church, Va.

East End Orpington Yards

Single Comb **Whites** Exclusively

JOHN J. HASKELL & CO., PROPRIETORS

East Falls Church, Va.

Strain founded from finest blood lines in America. Our stock has won wherever exhibited. They are bred for laying as well as exhibition. They are great, wide, low-down males and females, remarkably pure in color.

We have what you want and
will start you right at prices
that will please you : : :

Eggs for Hatching—Best Utility Birds—The Finest of Show Stock. Write us for prompt service. We never disappoint.

*Members of the American White
Orpington Club*

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ANCONAS



The wonderful new egg-laying breed that is attracting so much attention all over the United States. They combine great utility with striking beauty, and won the admiration of thousands at the Tennessee State Fair and Appalachian Exposition. They will please you, make money for you and prove a good investment. A. P. A. Diploma awarded to us for best cockerel in Mediterranean class at Tennessee State Fair. Biggest collection of ribbons ever awarded an Ancona breeder in the South. Stock and Eggs for sale. Watch us at the big Southern shows. 510 EGGS in four months from a pen of six hens is a record unequalled in poultrydom. If you want a bird that never sits, but lays all the time—big white eggs—then write us. Our big handsome catalogue is free for the asking.

DISMUKES & ARRINGTON

Box "C"

CASTALIAN SPRINGS, TENNESSEE

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1890





1911

A BROWN BEAUTY 1ST PRIZE WINNER MARSHALL
COCKEREL KNOXVILLE DEC. 08

Pullets Bred from this Cockerel Began to Lay
at 4 months and 10 days old

Henderson's Brown Beauties

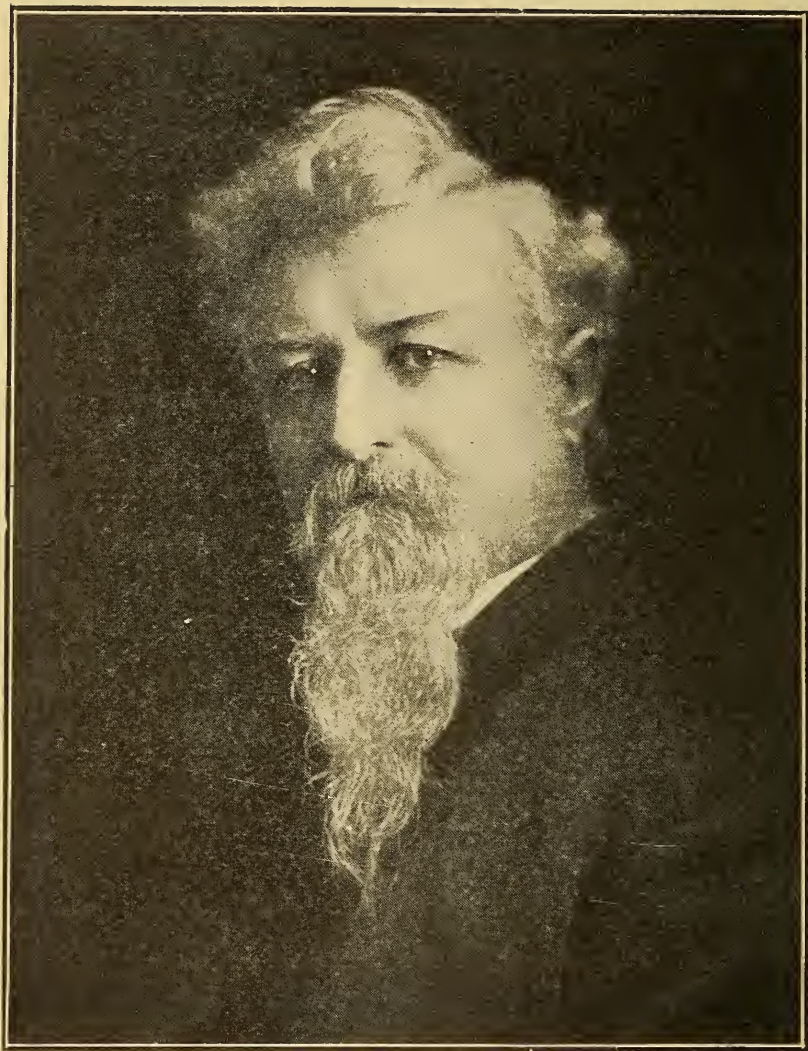
PRIZE WINNERS—GREAT LAYERS

- 
 I have won first cockerel in Knoxville great poultry show three times in succession under three different judges.
- 
 I won at the big Appalachian Exposition Poultry Show, 1910, four prizes on four entries—First Pullet, First Pen, Third Hen and the \$10.00 Gold Special for the best pen in State of Tennessee—all varieties competing.
- 
 It has been my good fortune during recent years to produce same of the very best exhibition specimens ever shown. There is no better laying strain than "Henderson's Brown Beauties."
- 
 My prices are reasonable. Satisfaction guaranteed. Correspondence Solicited.

J. H. HENDERSON, Knoxville, Tenn.

Breeder Brown Leghorn Since 1890.
Member American Single Comb Brown Leghorn Club.
Life Member American Poultry Association.

When Writing Advertisers, Mention "HEN AND CHICKS."



DR. J. C. HOLLOWAY, Galesburg, Ill.
Proprietor of Galesburg Fancy Poultry Plant, and breeder
of S. C. White Leghorns.



THE PRESIDENT

I WANT TO SPEAK TO YOU

JUST STEP
OVER HERE
IN THE
CORNER,
PLEASE



AY, do you want to raise STANDARD, LINE-BRED Single Comb **WHITE LEGHORNS**? The best layers in the world? The best exhibition blood? White as the driven snow? The kind that have quality written all over them? Well, **GALESBURG FANCY POULTRY PLANT**, of which my good wife is proprietress, can furnish them. And we have a SPECIAL proposition for new customers which is very interesting. Better write for it. Also enclose a two-cent stamp for our handsome circular every spring and fall.

Our birds are perfectly healthy and our plant absolutely clean and sanitary. You can get stock, day old chicks and chicks six weeks old, in season. We cull our young stock until everybody who buys of us is sure to get **QUALITY** and be pleased. Never invest in poultry until after you have written us.

We breed for **WINTER LAYERS** and **EXHIBITION BIRDS**—eggs and ribbons. **BLOOD TELLS EVERY TIME!** Considering the **QUALITY**, all our prices are very reasonable, but we are not competing against inferior stock.

Galesburg Fancy Poultry Plant

DR. J. C. HOLLOWAY, Manager

82 N. Henderson Street

GALESBURG, ILLINOIS

Always state where you saw our advertisement.

When Writing Advertisers, Mention "HEN AND CHICKS."

CALLAWAY'S
SINGLE COMB

Black Minorcas

Largest exclusive breeder in the South, carrying ten mated pens and will double this next season. On account of the growing demand for these eggs, could have sold every hen and pullet a half dozen times. Our winnings will prove we have the stock.

1909 Winnings—Five firsts and five seconds on five entries at Jackson, Miss., and Memphis, Tenn., winning on every bird entered. Again in 1910 nine firsts, five seconds and three specials for shape, color and weight at Memphis, Tenn., Jackson, Miss., and Greenville, Miss.

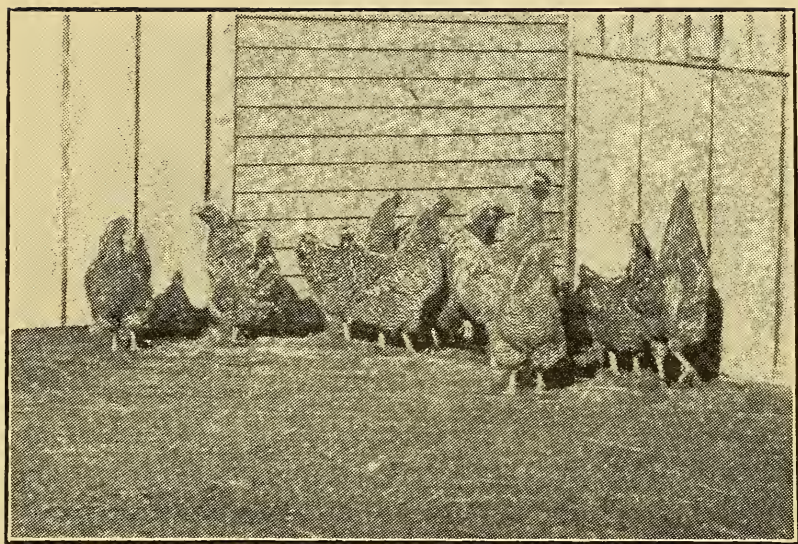
They are fast becoming the most popular bird of America. And it has come to stay. First—because they are two in one, a bird full and large, cocks weigh from 8 to 10 pounds; hens, 6 to 7 pounds in full flesh. Second—you have the best egg producer known to experiment stations, and the largest egg farms. Third—you have the kind that will command a premium for the eggs for market purposes from 5 to 15c per dozen. A bird that knows no season, laying as well in July, August, December and January as in the spring months of March, April and May. The up-to-date bird for the up-to-date farmer, poultryman and fancier, because they lay the eggs and you hatch them. The day has passed when a hustler sets a hen, as it is too slow, be he a farmer or poultryman. Write for history of MINORCAS and mating test.

G. E. CALLAWAY

LOCK BOX 89

OAKLAND, MISS.

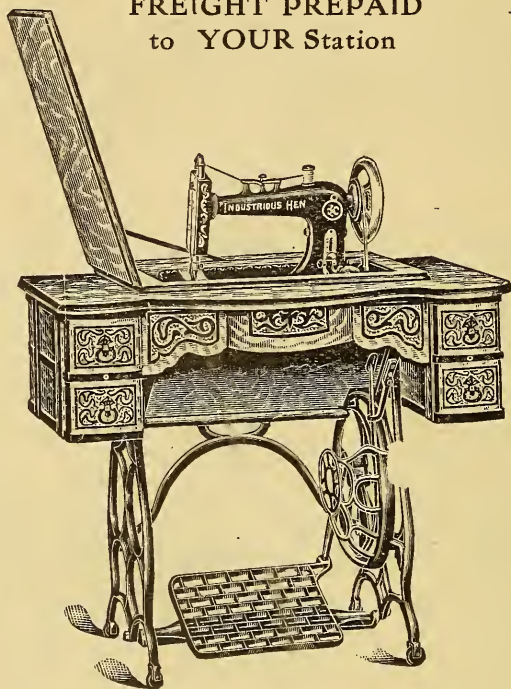
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A BUNCH OF BARRED ROCKS

\$50 Machine for \$ 16

FREIGHT PREPAID
to YOUR Station



Don't pay a high price for a sewing machine when you can get the famous **Industrious Hen machine** for \$16, delivered at your door, and guaranteed for ten years. It has been on the market for 30 years under another name. Is high arm, ball bearing, noiseless, easy running, stand handsomely embossed, hand polished case, etc. Is modern in every feature, and the best that can be made. Will be sent freight prepaid, with a year's subscription to **The Hen** for \$16, cash with order. Send for testimonials.

Industrious Hen Co., Knoxville, Tenn.

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S. C. Buff Orpingtons

Trap Nested for Intensified Laying



GOLDEN, not cinnamon buff. It's easy to breed the dark English buff, but you who have tried it, know what it means to get that shade that looks like polished brass. Breeding stock all up to and mostly over Standard weights. Stock from my Iowa State winners. Eggs from February 1 to July 1 every year

T. W. ROGERS

Vice Pres. Nat'l S. C. Buff
Orpington Club for Iowa

Box C., Lamont, Iowa

When Writing Advertisers, Mention "HEN AND CHICKS."

William Cook & Sons

ESTABLISHED 1873


Originators

of All the

Orpingtons

SCOTCH PLAINS, :: NEW JERSEY

EVENTUALLY if you want the Best Orpingtons you will send to their originators. **WHY NOT NOW?** and avoid loss and disappointment. Over 13,000 First Prizes won by us. **We guarantee safe delivery and satisfaction**, backed by a reputation of 38 years' standing. This means much to you.

SEND 10c. FOR CATALOGUE WITH A
HISTORY OF THE ORPINGTONS 
AND HINTS ON POULTRY KEEPING

Several Thousand Stock Birds Always
For Sale

When Writing Advertisers, Mention "HEN AND CHICKS."



R. C. WHITE ORPINGTON COCK.
Cheviot Orpington Farms, Cincinnati, Ohio.

SINGLE COMB White Leghorns

The Big Profit Payers

Bred to Lay. Eggs and Baby Chix.
Many Prize Winners in our Pens

Baby Chick Farming with our baby chix, direct from incubator, shipped by express when one day old, is the small poultry farmer's opportunity. Our Baby Chick in your hands will prove "Profit Payers."

Homer and Carneau Pigeons

THE KINDS FOR PROFITABLE
SQUAB BREEDING

All birds are guaranteed mated, banded and working. Stock for sale at all times. Write for prices. We guarantee satisfaction. Correspondence a pleasure.

W. K. Cumming & Company

WINCHESTER, KY., U. S. A.

MENTION THIS BOOK

When Writing Advertisers, Mention "HEN AND CHICKS."

THE CELEBRATED BELMONT FARM



Barred Rocks R. Island Reds
Indian Runner Ducks White Leghorns

Winners Wherever Shown

BREEDERS OF Barred Rocks, S. C. R. I. Reds, White Leghorns, Muscovy and Indian Runner Ducks, Imp. Show Homers and California Runt Pigeons, and Jersey Cattle of the fanciest breeding. We have the goods already acclimated and will give you full value for your money. Can furnish eggs any day in thousand lots. We have the laying kinds. Can furnish prize winners for the hottest show and utility stock that will make money. *Bred for health, bred for strength, bred for beauty, bred for utility*, insuring satisfaction to the poultryman for profit and the fancier for pleasure. A *CORDIAL INVITATION* is extended to all visitors to personally inspect *The Largest and Most Extensive Poultry Plant in the South*, a practical and most valuable object lesson and demonstration to the beginner and a revelation to the established breeder. Take Marietta suburban trolley cars at Walton Street side of Atlanta's new post-office, or write and LET US KNOW YOUR WANTS.

BELMONT FARM

LORING BROWN, Owner SMYRNA, GEORGIA

When Writing Advertisers, Mention "HEN AND CHICKS."

Neat Stationery Will Help Your Sales



SEND US YOUR ORDERS FOR
Letter Heads, Envelopes, Circulars, Booklets, Catalogs, Premium
Lists, and all kinds of

PRINTING

Blank Books, Notary
Seals, Stencils, Rubber
Stamps, Book Binding

Everything for the Poultryman, Merchant,
and Business Man. Prompt Delivery.

Handsome Poultry Cuts Representing
Every Known Breed May be Used
Without Additional Cost.

GOOD WORK HONEST COUNT FAIR PRICES

S. B. NEWMAN & CO.
617 Gay St., Knoxville, Tennessee

When Writing Advertisers, Mention "HEN AND CHICKS."



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